

Madras Agricultural

Journal

Golden Jubilee number

1961

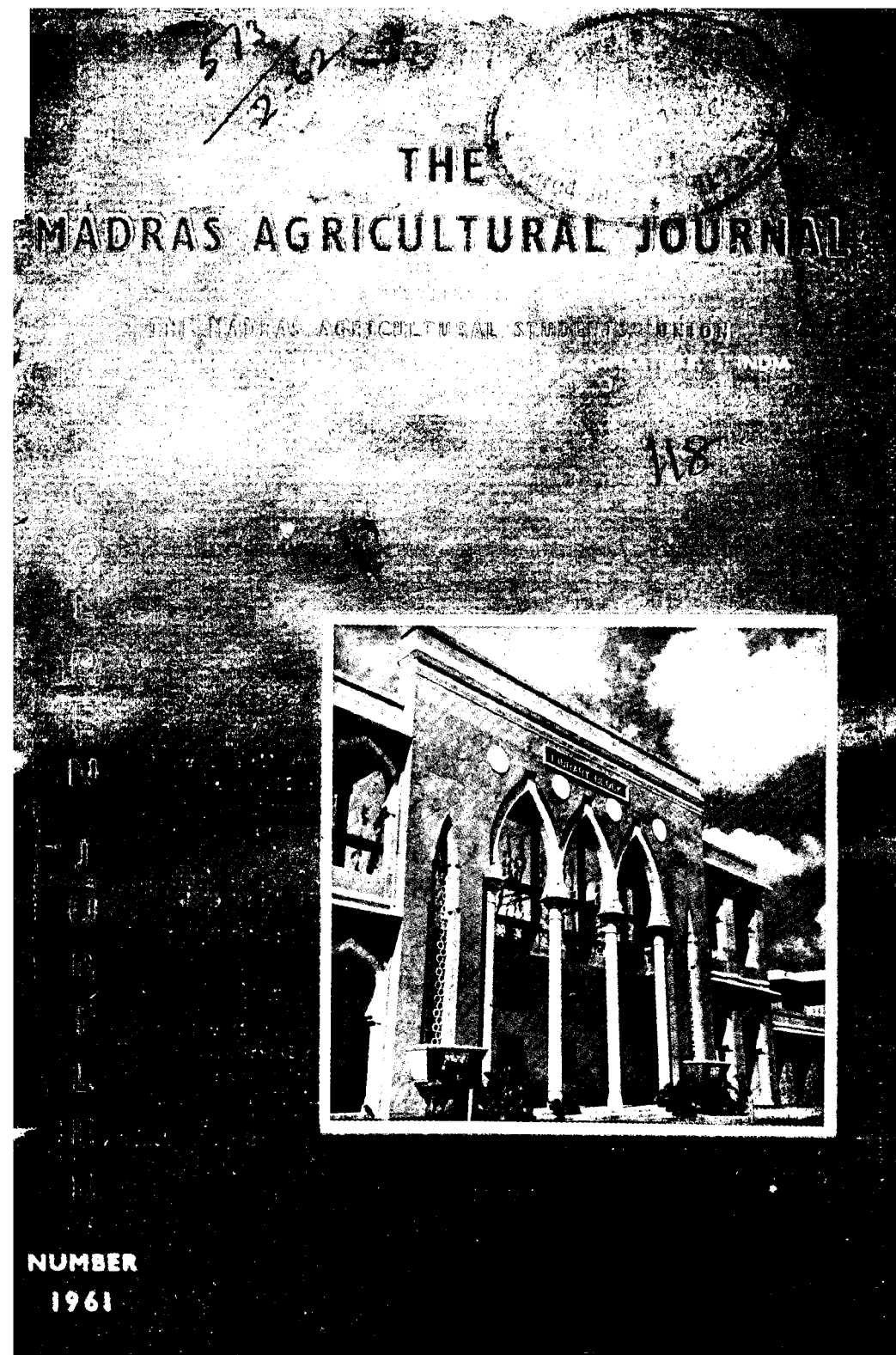
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PUBLISHED BY
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The Madras Agricultural Journal

GOLDEN JUBILEE NUMBER

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DECEMBER 1961

No. 12

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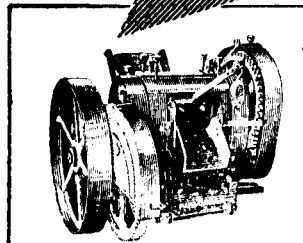
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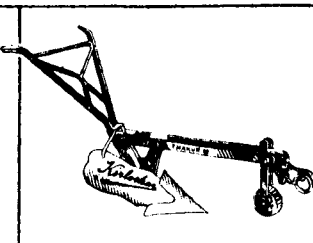
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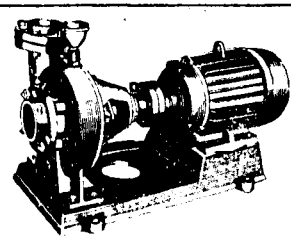
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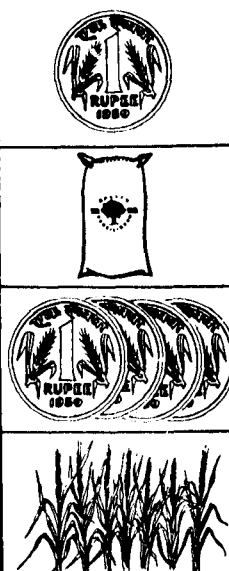
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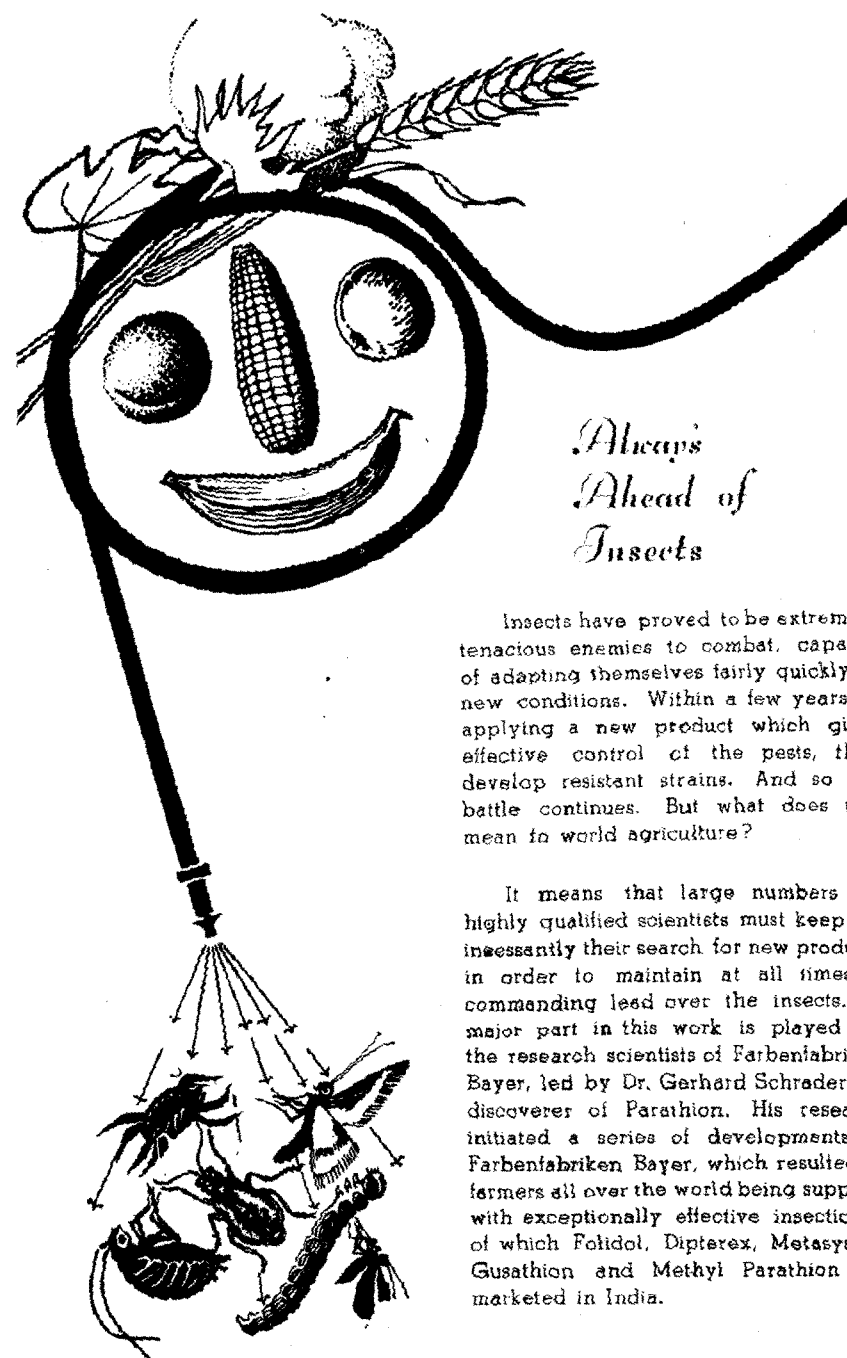
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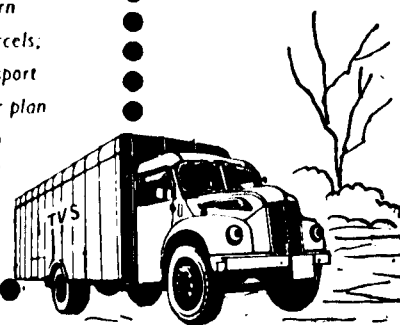
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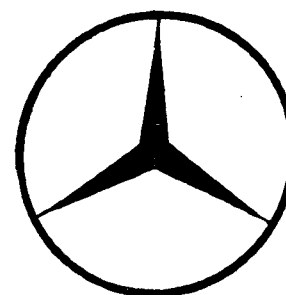
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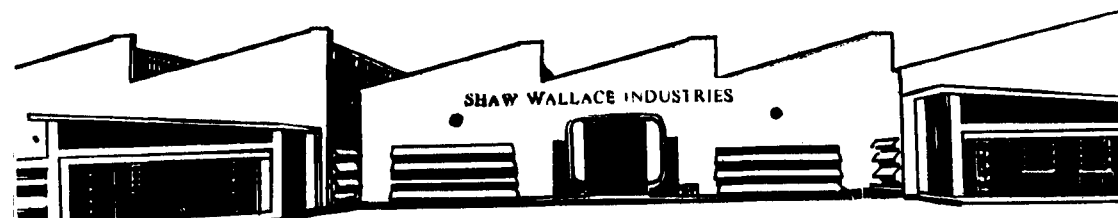
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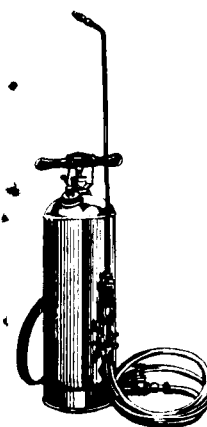
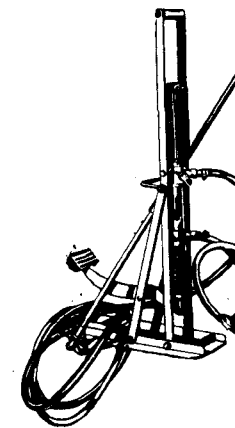
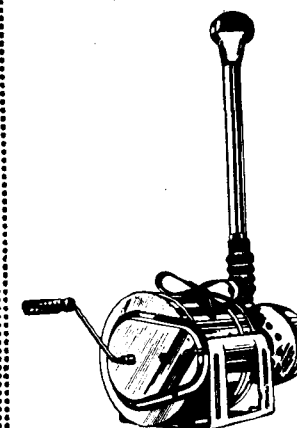
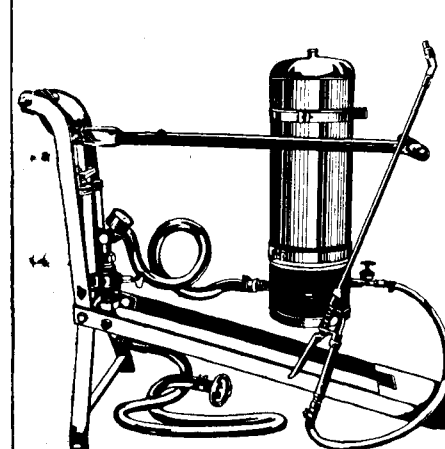
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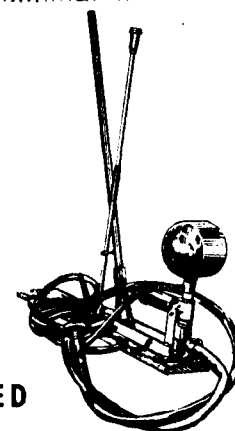
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The Madras Agricultural Journal

GOLDEN JUBILEE NUMBER

Vol. XLVIII

December 1961

No. 12

Editorial

The Madras Agricultural Students' Union can justly be proud of its meritorious services in the cause of Agriculture over the past half a century. The Golden Jubilee marks the march of five decades of useful service in the publication of the Madras Agricultural Journal. This Jubilee Souvenir Number brings you extracts of the proceedings of the celebrations of the Golden Jubilee of the Madras Agricultural Journal, the 44th College Day and Conference and other associated functions.

The Madras Agricultural Journal has occupied an important place in the field of scientific agricultural literature in India. The Journal has been the medium through which the many of the findings of agricultural research in Madras State have been brought to the notice of agricultural research groups elsewhere in India and abroad and to the extension workers and farmers of the State. Sri M. Bhaktavatsalam, who has been the Minister for Agriculture in Madras for the last ten years and who is closely acquainted with the activities of the M. A. S. U. commended the journal in the following words: "it is highly creditable that a non-official organisation has been responsible in conducting a journal of this type year after year uninterruptedly for the last fifty years".

agricultural scientist, both individually and collectively, can continue to improve the effectiveness and usefulness in the field of agriculture. For the first time this year a few delegates from other States and institutions attended the sessions.

The other conferences, namely the Departmental Officers' Conference, the Agricultural Engineers' Conference and the Extension Council were very usefully participated and successfully conducted. The Madras Agricultural Students' Union now takes the opportunity to welcome the many new patrons who have shown keen interest in the Golden Jubilee celebrations of the Madras Agricultural Journal.

We, who derive satisfaction from the past achievements of the M. A. S. U., are aware of the responsibilities that lie ahead. The past achievements set the pace for future progress. The ever increasing concern that the public has shown for the welfare of the agricultural community is a challenge for better service by all connected with the organisation and its journal. We on this great occasion of the Golden Jubilee of the Madras Agricultural Journal dedicate ourselves to the task ahead, the task of contributing towards the building up a stable and profitable agriculture in the country.



CELEBRATIONS OF THE GOLDEN JUBILEE OF THE MADRAS AGRICULTURAL JOURNAL AND THE 44th COLLEGE DAY AND CONFERENCE

The preparation of the Golden Jubilee Commemoration Number called "Trends in Agricultural Research" with Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture and President of the Union as its Chief Editor, to mark the completion of 50 years of publication of the Journal befits the Jubilee celebrations. Releasing the Commemoration number containing over sixty scientific papers comprising a wide range of topics relevant to agricultural progress, Sri Shankar, Vice-President, Indian Council of Agricultural Research observed that commensurate with the high standards the Madras Agricultural Journal has attained during the past years, the Commemoration volume is "a mine of agricultural information and an encyclopedia of references so far as the agricultural progress and developments are concerned".

This year's College Day and Conference has been distinguished in that a number of new ideas were incorporated into the conduct of the Conferences and functions. It was actually a 'Package Programme' of many functions as was observed by an eminent speaker of the day and very usefully and successfully carried through. Beginning with the State Farmers' Day in the morning, the campus put up an unique festive appearance with the real tillers of the soil moving along with the officers and students in the Agricultural College and Research Institute. The Farmers' Day was celebrated on a state-wide basis for the first time. This vastly enhanced the value of the Farmers' Day and provided a wider platform and a truer representation for exchange of ideas between farmers and research and extension workers. More than one thousand and five hundred farmers, drawn from all over the State, from distant Tirunelveli and Chingleput, attended the function. The farmer delegates were further benefited by visits to the agricultural farm and the special Agricultural Exhibition. The exhibition provided very useful information to the farmers about the research achievements and the practical utility of these to them in popular and easily comprehensible manner.

It was a matter of disappointment to all that Shri Morarji Desai, Union Minister for Finance could not be present for the function. Sri C. Subramaniam, Minister for Finance and Education, Madras State, who declared open the new magnificent Library building laid emphasis upon the indispensable nature of a library for the research worker.

The Madras Agricultural Students' Union gratefully acknowledges the great services rendered by Sri M. Bhaktavatsalam, Minister for Home and Agriculture, in the field of agriculture in Madras State in general, and the Madras Agricultural Department in particular, by naming the main hall in the Post-Graduate Block as the "Bhaktavatsalam Hall" and by unveiling a life size portrait of the Minister by the Minister for Finance and Education to adorn the hall.

Our Minister for Agriculture, Sri M. Bhaktavatsalam referred in his speech to the vast strides Madras has made during the recent past with special reference to food production and touched upon the several new programmes of agricultural development launched for attaining the targets fixed for the Third Five Year Plan. The Minister also laid the foundation stone for the Agricultural Training College and stressed upon the need for intensive training for people who were to handle the subject of Agriculture in high schools. He mentioned the scope of the six agricultural schools in the State started already to cater to the needs of those who were actually engaged in cultivation and stated that the object was to have ultimately many more such schools in the State.

Another special feature of this year was the conduct of the Second Annual Meeting of the Academy of Agricultural Sciences in two sessions. Forty two scientific papers were discussed in six working groups in the first session and the reports of the discussions were brought together in the plenary session which was presided over by Dr. R. W. Cummings of the Rockefeller Foundation. This eminent scientist put forth a few practical thoughts as to how each

The Golden Jubilee of the Madras Agricultural Journal and the 44th College Day and Conference were celebrated on 21-12-1961. Sri C. Subramaniam, Minister for Finance and Education, presided.

Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture welcomed the ministers and other distinguished guests. Sri C. Subramaniam then delivered his presidential address. He also opened the new Library Block, unveiled the portrait of Sri M. Bhaktavatsalam and also named the Central Hall in the Post-Graduate Block as "Bhaktavatsalam Hall".

Sri M. Bhaktavatsalam, the Minister for Home and Agriculture, inaugurated the Golden Jubilee celebrations of the Madras Agricultural Journal and the Madras Agricultural Students' Union and laid the foundation stone of the Agricultural Training Block. Shri V. Shankar, I. C. S., Vice-President, Indian Council of Agricultural Research, New Delhi then released the Golden Jubilee Commemoration Volume of the Madras Agricultural Journal and inaugurated the College Day and Conference.

Sri V. Karthikeyan, I. A. S., Director of Agriculture then proposed the vote of thanks.

The messages received and speeches made during the above functions are presented in this section.



SRI M. BHAKTAVATSALAM
Minister for Food & Agriculture, Madras



SRI C. SUBRAMANIAM
Minister for Finance & Education, Madras

MESSAGES

received on the occasion of
The Golden Jubilee Celebration of the Madras Agricultural Journal
and the 44th College Day and Conference

SHRI JAWAHARLAL NEHRU, *Prime Minister of India.*

Good wishes to the Agricultural College and Research Institute, Coimbatore in connection with the celebration of its 44th College Day on December 21, 1961.

* * * *

SHRI BISNURAM MEDHI, *Governor of Madras.*

I am very glad to know that the 44th College Day of the Agricultural College and Research Institute, Coimbatore will be celebrated on the 21st December 1961. Associated with this celebration, I understand that a number of important functions like the Golden Jubilee of the Madras Agricultural Journal, the opening of the new Library Block, laying the foundation stone for the Agricultural Training College and the Second Session of the Academy of Agricultural Sciences will also be held.

Ever since its inception in 1876, the Agricultural College and Research Institute has done great service to the cause of agricultural education and research in this State. India is predominantly an agricultural country and the Government are taking all steps for formulating and executing several schemes under the successive Five Year Plans which will ultimately increase our agricultural production. To achieve this objective, it is necessary that good and trained agricultural graduates would be made available in large numbers who will be ready to take up positions of responsibility and all facilities should be provided for doing research in agriculture.

Agricultural research, the aim of which is to find out ways and means of increasing the yield from the land and to make them available to the agriculturists so that they may utilise them and obtain better results, is of paramount importance particularly in a country like ours with its growing population. The Agricultural Research Institute at Coimbatore has done very useful work and has laid firm foundations for the development of scientific agriculture in this part of the country. I hope that in the years to come the College and the Research Institute will continue to play an even more important role in our efforts to increase food production.

On the occasion of the celebration of the 44th College Day of the Agricultural College and Research Institute Coimbatore, I send my greetings and good wishes to the staff and students for all health, happiness and prosperity.

SHRI SRIPRAKASA, *Governor of Maharashtra.*

I am very glad to know that the 44th College Day of the Agricultural College and Research Institute and several other functions are to be celebrated this month.

I have had the privilege of visiting the Agricultural College many times when I was Governor of Madras, and to know of the great and good practical work it has done during the long decades of its useful existence. Agriculture has always occupied a pivotal position in India's social and economic life; and it is but right that the latest advance in scientific knowledge should be utilised for the improvement of our agricultural methods and the enhancement of its products.

I send my warmest good wishes for the success of the functions and every success and happiness to all those who are partaking in the same.

* * * *

SHRI JAYA CHAMARAJA WADIYAR, *Governor of Mysore.*

It gives me particular pleasure to send a message of good wishes on the occasion of the 44th College Day Celebrations of the Agricultural College and Research Institute, Coimbatore.

The Agricultural College and the Research Institute housed in Coimbatore have earned fame as one of the oldest and leading institutions in the country imparting training year after year to hundreds of students in agriculture and allied subjects. The Institute has a band of enthusiastic workers engaged in research in a number of agricultural projects.

I have had occasion to participate in the Golden Jubilee Celebrations of the College in the year 1957 and of seeing myself the excellent work done there.

I wish the celebrations every success and the Agricultural College and its allied institutions a very bright future.

* * * *

SRI K. KAMARAJ, *Chief Minister of Madras.*

The work of the Agricultural College and Research Institute has considerably supported the efforts of the State in increasing food production to meet a growing population. I send my best wishes for the success of the 44th College Day Celebrations and the functions and conferences proposed to be celebrated in association with this happy event. The Madras Agricultural Students' Union deserves to be commended for arranging the very impressive programme in conjunction with the College Day.

SHRI S. K. PATIL, *Minister for Food and Agriculture, Government of India.*

It gives me pleasure to know that the Madras Agricultural Students' Union is celebrating the 44th College Day of the Agricultural College and Research Institute Coimbatore on 21st December, 1961 which also marks the Golden Jubilee of the Union as well as its chief organ, the Madras Agricultural Journal. This Institution has made great strides since its inception. It has been rendering useful service in the fields of agricultural education and research and has thus made substantial contribution towards increasing agricultural production which is the prime need of the moment. I congratulate the Union on its efforts to promote agricultural science in the country and take this opportunity to send my good wishes for the success of the College Day celebrations and other functions associated with it.

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SHRI P. S. DESHMUKH, *Minister for Agriculture, Government of India.*

I was glad to learn that the 44th College Day of the Agricultural College, Coimbatore is to be celebrated on the 21st December, 1961. It is still more gratifying that along with this function the Golden Jubilee of the Madras Agricultural Journal, the opening of the new Library block, laying the foundation stone for the Agricultural Training College and lastly to unveil the portrait of the veteran Minister of Agriculture of Madras, Shri M. Bhaktavatsalam etc., are to be celebrated at the same time.

Every one knows that the Agricultural College at Coimbatore and the Research Institute are some of the oldest Institutions of their kind in India, their establishment going back to over 85 years. Actually, Coimbatore has become famous not only in field of sugarcane but other crops also. Very valuable varieties have been evolved at this Institute from time to time which have conferred large benefit on the farmers.

I have great pleasure in sending my best wishes for the success of all these functions as well as the work in the field of Agriculture that is carried on in the various Institutes at Coimbatore.

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SRI C. SUBBAMANIAM, *Minister for Finance, Madras.*

Problems of agricultural production have had to be tackled with a sense of urgency to keep up with rise in population trends. In Madras State, the work of Government in this field has been well supported by power and irrigation development projects, and in a silent unostentatious way, by the Agricultural College and Research Institute. Its pioneering

work in the State in the field of agricultural education and research has also been a factor for increased agricultural production and welfare. I am glad that in association with the 44th College Day of the Institution, a number of important related functions and conferences have been arranged. The Madras Agricultural Students' Union are to be congratulated for organizing the programme. I send my best wishes for the success of their efforts.

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SRI M. A. MANICKAVELU, *Minister for Revenue and Health, Madras.*

Much progress is being made in the Agricultural College in the matter of research and other improvements. I congratulate the staff and others for the interest evinced and wish the functions all success.

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SRI R. VENKATARAMAN, *Minister for Industries and Labour, Madras.*

The proud record of the Madras Agricultural Students' Union exemplifies the value of voluntary relationship for good and constructive work. This is of the greatest significance in the field of food production. I am happy that the Golden Jubilee of the Union and its chief organ, the Madras Agricultural Journal synchronise with the 44th College Day of the Agricultural College and Research Institute. I congratulate the Union for the impressive programme of functions and conferences arranged as part of the celebrations. I send my best wishes for the success of the programme.

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SHRI M. V. KRISHNAPPA, *Deputy Minister for Food and Agriculture, Government of India.*

I am glad to know that the Agricultural College and Research Institute, Coimbatore is celebrating the 44th College Day on the 21st December, 1961. The Agricultural College and Research Institute, Coimbatore is one of the oldest Institutes of its kind in India having had its origin in the year 1876, when it made a humble start as an Agricultural Institute at Saidapet, a suburb of Madras. It moved to its present site at Coimbatore in the year 1909 and since then has been serving the cause of agricultural education and research in Madras State. Its achievements in the field of breeding improved strains of various crops have contributed in no small measure to increased crop production. I wish it even greater success in the coming years.

SIR A. L. MUDALIAR, *Vice-Chancellor, Madras University.*

I am glad to learn that the 44th College Day of the Agricultural College and Research Institute, Coimbatore will be celebrated on the 21st December 1961. Being one of the oldest Agricultural Colleges, the Institute is having a good tradition, and has done a long useful and noble work. Some of its former *alumni* have distinguished themselves in original research, and many are the products of this Institute who have gone to various places in India. I am happy that the College is to be enriched by the addition of a new building for the Central Library for the use of both the College and the Research Institute.

The State Government has evinced keen interest in this College. I hope that the college will attract some of the best qualified teachers in Agriculture and train a large number of undergraduates, post-graduates and research workers. I wish the function every success.

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DR. JOHN A. HANNAH, *President, Michigan State University, East Lansing.*

Michigan State University, oldest Agricultural College in America extends greetings on this momentous occasion. Congratulations and best wishes to all.

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MR. C. TYLER WOOD, *Minister for Economic Affairs and Director, U. S. Technical Co-operation Mission to India.*

I have great pleasure in sending my best wishes for a future as its past to the Agricultural College and Research Institute, Coimbatore.

I have no doubt that your College will continue its leadership in agricultural research. I also take this opportunity to send my greetings and good wishes to the Madras Agricultural Journal on its Golden Jubilee.

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SIR C. V. RAMAN, *Director, Raman Research Institute, Bangalore.*

I am glad to note that the 44th College Day of the Agricultural College and Research Institute at Coimbatore is to be celebrated along with various other functions. I also notice that the Academy of Agricultural Sciences is to hold its second annual session.

It is a great occasion in the life of the college and I am writing to send you my heartiest congratulations and good wishes.

DR. C. P. RAMASWAMY AIYAR, *Delisle, Ootacamund.*

I have always admired the fine work that has been turned out by the Agricultural College and the manner in which it has profoundly influenced agricultural development in the South of India. I wish the 44th College Day all success and I congratulate you on the idea of unveiling the portrait of Sri M. Bhaktavatsalam.

The Academy of Agricultural Sciences is an institution full of promise for the future and I wish it all success.

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SHRI K. SANTHANAM, *Member, Rajya Sabha.*

I have great pleasure in sending my felicitations to the Union and good wishes for the success of the Celebrations.

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DR. M. S. RANDHAWA, *Adviser (Resources) Planning Commission.*

The Agricultural College and Research Institute, Coimbatore which had its origin more than eighty years ago, is one of the oldest Agricultural Institutions in this country. It has carried out pioneering work not only in training agricultural workers but also in conducting research in several branches of agricultural science, particularly for the Madras State. Some of its important contributions have received international recognition. I offer my hearty felicitations to the Madras Agricultural Students' Union as well as the Madras Agricultural Journal who will be celebrating their Golden Jubilee on the 44th College Day of the Agricultural College and Research Institute on the 21st December, 1961.

On this happy occasion the Agricultural College and Research Institute can with pride look back on its past achievements. I am also sure that its future achievements will be as glorious and striking as it has been in the past.

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DR. B. P. PAL, *Director, Indian Agricultural Research Institute, New Delhi.*

On the occasion of the 44th College Day of Agricultural College and Research Institute, Coimbatore I have great pleasure in conveying to you and to your colleagues and students, felicitations and good wishes on behalf of the staff and students of the Indian Agricultural Research Institute, as also on my own behalf.

Along with the College Day celebrations, you will be celebrating the Golden Jubilee of the Madras Agricultural Journal. Your College and Research Institute is among the oldest and finest research and educational institutions in the country, and it has done yeoman service to the India's agriculture and agricultural education. The country can justly be proud of its record of achievement. The Madras Agricultural Journal, likewise, has been in the forefront in its field for a half century now.

With a proud record of achievements, your institution is now entering a phase of expansion, consolidation and modernisation. This is as it should be, and it is indeed very necessary in the context of our Nation's development plans. Your Agricultural College has rightly been considered as one of the best in the country and I am confident that it will soon develop into a model centre for post-graduate education also.

I congratulate you, your College and Research Institute, the Madras Agricultural Students' Union, the Madras Agricultural Journal, and the Academy of Agricultural Sciences and wish you all further success and an even brighter future.

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DR. B. VISWA NATH, *Retired Director of Agriculture, Madras.*

It is a matter of genuine satisfaction to learn that the Madras Agricultural Students' Union and its Journal the Madras Agricultural Journal are celebrating their Golden Jubilee.

While the Union has been organising conferences and discussions annually, the Journal has been presenting monthly a most impressive array of contributions from workers in the different aspects of agriculture in and outside India.

The contributions are large in number and varied in character and interest and have done a good deal for shaping and advancing study and research in agriculture.

May the Union and its Journal continue its noble work with even greater results and usefulness.

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SIR T. S. VENKATARAMAN, *Retired Sugarcane Expert, Govt. of India.*

When I was posted to the Coimbatore Agricultural College as Botany Teacher more than half a century back I had to carry along with my batch of dozen students microscopes to the improvised verandah class room two furlongs away. The present extensive campus of the college makes me extremely joyous. May the college grow from strength to strength and gain international reputation like the sugarcane of Coimbatore.

MR. F. C. BAWDEN, *Director, Rothamsted Experimental Station, Harpenden, Herts, England.*

I send you congratulations on your 44th College Day and wish you every success for the future from the oldest agricultural research station in the world.

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COLONEL V. SUBRAMANIAM, *Vice-Chancellor, Annamalai University.*

The College and Institute have been productive of lasting benefit to the country. To the teachers, workers and students, the thanks and appreciation of the people, administrators, educationists, agriculturists and the public generally are due. The programme for the future, which the College and Institute have planned, gives hope of continuing progress. To them we give our best wishes.

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DR. A. C. JOSHI, *Vice-Chancellor, Punjab University.*

On the occasion of the 44th College Day of the Agricultural College and Research Institute, Coimbatore I extend my greetings to the staff and the students and wish them every success in promoting the cause of sound agricultural education for which the Institution has been known for a long time.

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M. G. RAJARAM, *Joint Secretary, Government of India, Ministry of Scientific Research and Cultural Affairs, New Delhi.*

As one of the old *alumni*, I am indeed, proud of the great strides made in all directions in that Institution where I had not only the privilege of studying but in the shaping of the policies of which I had made my own humble contributions. I am particularly happy that the main hall of the Post-Graduate Institute will be named as "Bhaktavatsalam Hall". No doubt, but for his dynamism and wide imagination the development of Agricultural College and Research Institute and the Post-Graduate Institution would not have been possible. It is, therefore but fitting that the portrait of Shri Bhaktavatsalam will also be unveiled on that occasion to grace the walls of the Bhaktavatsalam Hall.

I am so sorry I will not be able to be there much as I would have loved to do so. However my congratulations to you and your staff and also all the best wishes for the grand success of the function.

SHRI LAL SINGH, *Consultant, COPP, Planning Commission.*

Please accept my highest admiration for most valuable contribution made by Coimbatore Institute in the cause of Agricultural education and research on which our country can take justifiable pride.

Undoubtedly Coimbatore Institute has done yeoman service to the cause of Agricultural Education and Research not only for Madras State but the country as a whole. I congratulate you and your staff on the great achievements that you have to your credit and in which you and your staff can take justifiable pride.

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DR. O. N. LIMING, *Field Operations Officer, Technical Co-operation Mission to India.*

The Agricultural College and Research Institute, Coimbatore, Madras State has a great reputation in the field of agricultural development. This present position creates a challenge which is even greater than the reputation; a challenge to serve not just your Institution but to serve all of the people of Madras and of India.

Your 44th College Day is a grand event, giving honour to past and attention to your future. It is proper that this be done with the help of the many prominent guests. It is a step in meeting the challenge to serve your Institution and the State.

Many such honour and such service always extend to the field workers and to the cultivators and their families from whom your Institution has received and must always receive full support. The Agricultural College and Research Institute was built by them and belongs to them. I congratulate the field workers and the cultivators on your success.

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MR. JAMES W. BURKE, *Chief, Training Branch, Technical Co-operation Mission to India.*

On the occasion of the 44th College Day of the Agricultural College and Research Institute, Coimbatore may I extend to you and your colleagues my warmest greetings and my sincere congratulations on the outstanding attainments of your Institution.

As we look at the strides being taken today by Indian Agriculture, we realize how much of this was made possible by the foresight and persevering efforts of the founders and developers of colleges such as yours.

TCM is proud of the opportunity it has had for association with your efforts and wishes you every success in the years ahead.

DR. N. D. PEACOCK, *Dean, Resident Instruction College of Agriculture, University of Tennessee, Knoxville, Tennessee.*

Sincere congratulations to Coimbatore Agricultural College and Research Institute, occasion — College Day, compliment past records of service to agriculture, recognize present leadership and confidently anticipate future significant contributions.

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DR. M. B. BADENHOP, *Group Leader, University of Tennessee-India Agricultural Programme, T. C. M., Bangalore.*

May I extend sincerest congratulations to the Agricultural College and Research Institute, Coimbatore on the occasion of the 44th College Day. The many important events scheduled on this occasion are indicative of progress. May the future of your education and research institution be even more glorious than that of the past. The University of Tennessee, through the Inter-Institutional Arrangements Program, is proud of your accomplishments. We are happy of the opportunity to be associated with you through our program of helping train your faculty, supplying needed books for your library and scientific equipment for your laboratories, and providing technicians requested by your Institution.

The University of Tennessee extends best wishes on this momentous occasion.

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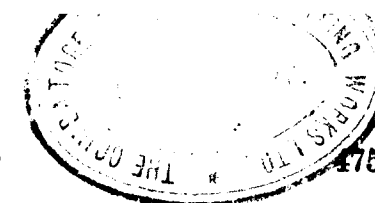
DR. ARTHUR D. WEBER, *Project Leader, The Ford Foundation, New Delhi.*

I am happy, indeed, to send my good wishes and felicitations on the occasion of the celebration of the 44th College Day of the Agricultural College and Research Institute Coimbatore. It is particularly gratifying to note that an important function of College Day is the opening of a new building of the Central Library. All teachers, students, research and extension workers, *alumni* and friends of Coimbatore Agricultural College deserve special commendation for their support of this outstanding Institution. I wish for all of them continued success and much satisfaction in their efforts to further the best interests of Indian Agriculture.

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DR. EPHRIAM HIXSON, *Agricultural Education Advisor, T. C. M., New Delhi.*

Please accept my congratulations on the 44th College Day at your Institution.



I trust that this is only the beginning of successive years of the Institute in the service of Madras State and the nation.

I wish for you and the Institute the very best in progress to your ultimate goal of a truly coordinated program in agriculture devoted to the development of the resources of the State.

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SHRI G. N. RANGASWAMY AYYANGAR, *Retired Principal, Agricultural College, Coimbatore.*

On this happy occasion come sincere greetings from one who lived and worked with you for thirty years.

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SRI M. C. CHERIAN, *Retd. Principal, Agricultural College, Coimbatore.*

It is a pleasure to watch the all round progress of the Agricultural College and Research Institute. I have no doubt that the activities of this Institution will grow further.

I wish the functions connected with the 44th College Day all success.

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DR. B. L. SETHI, *Secretary, Indian Central Cotton Committee.*

I have great pleasure in offering my hearty congratulations and good wishes to the Agricultural College and Research Institute, Coimbatore on the occasion of its 44th College Day, which is being celebrated in conjunction with the Golden Jubilee of the Madras Agricultural Journal and other functions. Since the inception of the Institute at Saidapet in 1876 and its shifting to the present site at Coimbatore in 1909, the Institute has done yeomen service in the field of agricultural research and education. Its achievements especially in breeding improved strains of rice, sorghum, cotton and oilseeds are now too well known. In regard to cotton, special mention may be made of one of the early strains evolved viz., Co. 2, which earned great popularity among the farmers due to its robust habit and wide adaptability. Its value in breeding work was soon recognised by the breeders elsewhere and many outstanding strains like Laxmi and M. A. 5 in Mysore and Deviraj and Devitej in Gujarat, were evolved from crosses with it. Strains like MCU-1 and MCU-3, which are much more superior in quality to Co. 2, have since been evolved and hold the field now, contributing to the prosperity of the farmers and catering for the needs of the cotton textile industry.

The Madras Agricultural Students' Union, which is a unique association of students-past and present-and farmers and scientists along with its scientific monthly, 'The Madras Agricultural Journal', deserve congratulations on completing half-a-century of commendable service in the cause of agricultural research and education.

Institutions of this kind have an important role to play in achievement of our Plan objectives and it is confidently hoped that it will have outstanding contributions to make in the future as well.

I once again extend my best wishes to the Agricultural College and Research Institute, Coimbatore on this important occasion.

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SHRI K. C. CHETTY, *Indian Central Tobacco Committee.*

The Agricultural College and Research Institute, Coimbatore is one of the pioneer Agricultural Institutions in India and has, during its existence of about 54 years as a College considerably contributed to the upliftment of Indian Agriculture as a whole. I wish every success to the celebration of its 44th College Day and other important functions associated with it.

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SHRI M. S. PATEL, *Secretary, Indian Central Oilseeds Committee, Government of India.*

On behalf of the Indian Central Oilseeds Committee and on my own behalf, I extend warm greetings to the Institute and wish their functions all success.

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SHRI P. P. CHANDRA, *Indian Central Sugarcane Committee.*

The Agricultural College and Research Institute, Coimbatore is one of the pioneering Institutions in India which formed a base on which stands the present organisation of Agricultural Research and Extension in the Madras State. I am sure that with the additional facilities being provided the Institute will contribute more and more towards the cause of Agriculture.

I wish the celebrations all success.

SHRI N. MAHALINGAM, M. L. A., *Pollachi.*

Twenty first December 1961 is a most memorable day in the history of the College. This Institution has come to occupy pride of place in India. Our grateful thanks to Shri M. Bhaktavatsalam, Minister for Agriculture for taking such keen interest in the growth of the college and also my hearty congratulations to the Dean, Dr. Krishnamurthi for the hard work he is putting in.

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Dr. M. L. ROONWAL, *Director, Zoological Survey of India, Calcutta.*

The Madras Agricultural Students' Union now has a half century of tradition behind it—a tradition accompanied by solid achievement. On the present occasion, when the Union is celebrating the 44th College Day as well as the Golden Jubilee of the Madras Agricultural Journal, which is an organ of the Union, and many other scientific functions, I consider it a privilege to send a message of good wishes for the success of these celebrations as well as for the continued prosperity of the Union. As an agricultural scientist—a student of agricultural zoology, to be more precise—I feel proud of the Union's steady achievements.

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SHRI D. VISWANATHA REDDY, *Director of Agriculture, Andhra Pradesh.*

Agricultural College and Research Institute, Coimbatore has been rightly recognised as one of the Premier Agricultural Institutions in this country not only for producing several eminent Agricultural Scientists but also for its significant contribution to Agricultural Research and Education. I am glad that in recent years, this Institution has witnessed expansion in several spheres.

As one who has been intimately associated with the Department of Agriculture and also with the Agricultural College and Research Institute, Coimbatore in the erstwhile Madras State, I am extremely happy to wish the function all success.

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SHRI BASHNEER AHMED SAYEED, *Retd. Judge, High Court, Madras.*

I offer the authorities concerned my hearty felicitations on the excellent progress which the Agricultural College has made during the Century that has gone by. The advance made in every direction is remarkable, more especially during the recent years. I am sure, if the same rate of progress is maintained in the years to come, the Agricultural College would have contributed immensely to the acceleration of agricultural production in a scientific way in our country.

SRI T. M. NARAYANASWAMY PILLAI, *Retd. Vice-Chancellor, Annamalai University.*

The Agricultural College and Research Institute, Coimbatore have an outstanding record of achievements which are famous throughout the world and which have contributed substantially to the welfare of our country. On this occasion of the Forty-fourth College Day, we have to remember with gratitude all the stalwarts who have built up the noble institutions by their devoted service and it gives me special pride and pleasure to note how the college and the institution have enormously expanded in every direction during the period of service of my friend Dr. Krishnamurthi. I wish the college a still more glorious future and send my congratulation.

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SRI G. D. NAIDU, *Industrialist, Coimbatore.*

I have great pleasure in wishing the functions a grand success.

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SRI K. SRINIVASAN, *Director, South Indian Textile Research Association, Coimbatore.*

I am happy to learn that the Agricultural College and Research Institute is celebrating its 44th College Day. The College has done pioneering service in the cause of Indian Agriculture, both in training agricultural scientists and in research. Its work has contributed substantially in raising the quantity and quality of our agricultural production. I wish the 44th College Day and the other important functions associated with it all success.

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PROFESSOR T. S. SADASIVAN, *Director, University Botany Laboratory, Madras.*

Godspeed and good luck to you.

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SRI R. SRINIVASA IYER, *M. L. A., Madras.*

The record of useful service that the Agricultural College and Research Institute, the Agricultural Students' Union, the Agricultural Journal, the Principal and Professor of the College and Research Workers have done to the Agricultural world and Madras State in particular is highly laudable and deserves to be printed in letters of gold and preserved for ever. The economic health and prosperity of India, including its industrial growth depends mainly upon increased agricultural production and I wish all functions on 21-12-1961 relating to the above all success.

SRI K. SUBBAMANIAM, *Dy. Chief Botanist, Botanical Survey of India.*

Having had many contacts with the eminent research workers of the Madras Agricultural College and Research Institute, Coimbatore it gives me great pleasure to send my greetings and best wishes on the occasion of the Golden Jubilee celebration of the Madras Agricultural Students' Union and the various other functions. The Madras Agricultural Journal, the chief organ of the Madras Agricultural Students' Union, in which the reflection of the brilliant record of work in the field of agricultural research carried out under the auspices of the Institute can be found, will, I am confident, continue to maintain the high standard in the years to come. I wish the function grand success.

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SRI V. T. SUBBIAH MUDALIAR, *Retired Professor of Agriculture.*

The contribution of the Madras Agricultural Students' Union to the development of agricultural sciences has been phenomenal and its organ, the Madras Agricultural Journal, has become an authoritative forum for dissemination of scientific agricultural information, recognised by agricultural research workers the world over. As one associated with the Madras Agricultural Students' Union for over 43 years, I foresee a glorious future for it. My best wishes to the Madras Agricultural Students' Union, its members and the Madras Agricultural Journal.

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DR. C. O. SPELLMAN, *Agronomy Adviser, College of Agriculture, Dharwar.*

I hope for the College and Research Institute even more success in the future than it has already had, which is indeed phenomenal. My congratulations and best wishes.

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MR. O. ULREY, *Agricultural Economist, US/TCM, Ranchi.*

The College and Research Institute, the staff and former students are to be commended on the service provided for villagers, and on the agricultural program underway. We have followed several of your significant developments—the integration of teaching, research and some extension; and the strengthening of your post-graduate program.

You have the foundations started for a real Agricultural University, with its legion of services, especially for your rural citizens.

Greetings and best wishes for your College Day, and for the years of service ahead.

RAO BAHADUR Y. RAMACHANDRA RAO, *Retired Madras Government Entomologist.*

As one who has been continuously a member of the Union from the very beginning, I write to say how much my heart rejoices to find that the Union has been gaining from strength to strength and to learn that it is now celebrating its Golden Jubilee. Having had the privilege as Editor, of piloting the Madras Agricultural Journal for 2 or 3 years in the far past through a time of stress, I feel very happy that it has, since been appearing punctually and is now celebrating its fiftieth year.

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SRI. K. KRISHNAMURTHI RAO, *Former Secretary of M. A. S. U. for 1914 to 1917.*

Continue striving agriculturists' betterment; wish successful Jubilee.

MESSAGES WERE ALSO RECEIVED FROM THE FOLLOWING

- Sri C. A. Ramakrishnan, Member, Board of Revenue, Madras.
 .. Karumuttu Thiagarajan, Madurai.
 .. C. A. R. Bhadrar, Chief Conservator of Forests, Madras.
 .. C. M. John, Retired Principal, Agricultural College, Coimbatore, and
 Retired Director, Indian Coconut Research Institute.
 .. C. R. Srinivasa Iyengar, Retired Head-quarters Deputy Director of Agriculture.
 .. K. T. Alwa, Retired Headquarters Deputy Director of Agriculture.
 .. Sundararajan, Secretary, Farmers Forum, Kerala.
 .. K. P. Madhavan Nair, Vice-President, Indian Central Coconut Committee,
 New Delhi.
 .. Avtar Singh, PIRRCOM, Sirsa.
 .. M. R. M. Punja, General Manager, Kothari.
 .. G. D. Gopal, Industrialist, Coimbatore.
 .. K. N. Palaniswami Gounder, M. L. A., Tirupur.
 .. T. Sundaram, Director, Meenakshi Mills, Madurai.
 .. V. P. Gokhale, Principal, Government College of Agriculture, Parbhani.
 .. T. S. Ramakrishnan, Pathologist, The Rubber Research Institute of India.
 Dr. P. V. Rama Varier, Coimbatore.
 Sri Krishna Rao, Tirunelveli.
 .. Thiruvengada Mudaliar, Madras.
 .. Rajasekhara Mudaliar, Retired Systematic Botanist and Professor of Botany.
 .. M. Sundaram, Retired Regional Fertiliser Officer.
 Director of Agriculture, Kerala.
 Secretary, Arecanut Committee, Calicut.
 The Editor, Journal of the Indian Institute of Science, Bangalore,
 The Secretary, World University Service, Madras-31.

Welcome Speech by Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture.

Mr. President, Hon'ble Minister for Home and Agriculture, Shri Shankar, Dr. Cummings, Dr. Badenhop, Sri Karthikeyan, Sri Ramachandran, distinguished guests, Ladies and Gentlemen:

I have pleasure in saying a few words of welcome on this august occasion. Before doing so, however, I would like to express our sense of regret because of the fact that the Union Minister for Finance, Sri Morarji Desai, in spite of his best endeavours, has not been in a position to attend this function this afternoon. The circumstances were entirely beyond his control and when he spoke this morning on the phone with our Minister for Food and Agriculture, he expressed that he was very deeply disappointed that the circumstances did not permit him to proceed from New Delhi and arrive at Coimbatore in time to attend this function, mainly because of certain difficulties in the take off of plane from New Delhi. But at the same time what gives us compensatory satisfaction is the fact that actively participating in the function are two great sons of Tamilnad, an eminent and a seniormost civilian Shri Shankar, and a representative of one of the greatest and world renowned organisations of philanthropy viz. Dr. R. W. Cummings of the Rockefeller Foundation. We have also with us Dr. Badenhop, a representative of the great organisation, the Technical Co-operation Mission of U. S. A. which has been helping this country. He is attached to the T. C. M. as the group leader from the Tennessee State University, which is linked up with our Institution in the organisational arrangements for aid. On behalf of the Agricultural College and Research Institute, Coimbatore as the Dean, and on behalf of the Madras Agricultural Students' Union, as its ex-officio President, I have great pleasure in welcoming all these distinguished guests and every one assembled here to our midst to day.

With regard to our Minister for Agriculture, it is very superfluous to emphasise the many things which he has done for the Department of Agriculture as a whole and for the Agricultural College and Research Institute in particular. I have spared no occasion to mention the many concrete evidences such as a number of new buildings which stand as permanent symbols of the achievements and progressive outlook of Mr. Bhaktavatsalam, our Minister for Home and Agriculture. It is in remembrance of the many services which he has rendered to the cause of Agriculture that the Madras Agricultural Students' Union came forward to present a full size portrait in colour to be placed in the main hall of the Post-Graduate Building, for the establishment of which the Minister for Home and Agriculture was responsible, and we have the privilege of Sri C. Subramaniam, Minister for Finance and Education unveiling the portrait and naming the hall in the Post-Graduate Block as "Bhaktavatsalam Hall". This is the least that the Madras Agricultural Students'

Union could do as a token appreciation. It is a great pleasure to us that our great son of Coimbatore Sri C. Subramaniam, to whom the Agricultural College and Research Institute is something very close is the Minister for Finance and Education. Not only this Institution, but also the Agricultural Department as a whole has received from him every consideration. The Minister for Finance and the Minister for Agriculture have been, as you are all aware, jointly responsible for improving the scales of pay and conditions of service in the Agricultural Department (Applause). It is not an exaggeration to say that this is because of the consideration of the special role of agriculture in the development of the country. The Minister for Finance has liberally supported the many agricultural schemes for the welfare of the farming community. I have however, a request and an appeal to make to him viz. that before he hands over his portfolio as Minister for Finance at Madras and goes over to New Delhi, certain little things and proposals which are pending, such as the auditorium in the first floor of the New Library building which is to be opened by him today on behalf of the Union Minister of Finance, may all be kindly sanctioned by him as they are absolute necessities to which this Institution has been looking forward.

With regard to Mr. Shankar, I have had the privilege of associating myself with the Indian Council of Agricultural Research in several of its meetings in which he has presided. It has become very clear that in his hands as the Special Secretary for Agriculture, Government of India, and as Vice-President of the Indian Council of Agricultural Research, the great organisation I. C. A. R. is well on its march. Time and time again, when I have attended the conferences in which he presided, I have been impressed with his clarity of thought and it has become obvious that he is considering agriculture from really an All-India picture and he has been straining every effort to draw up a master plan for the future of agriculture in this country. The I. C. A. R. has been supporting projects of research all over the country; and particularly the Agricultural College and Research Institute by virtue of its age and traditions, by virtue of equipments and laboratory facilities and by virtue of its technical personnel, has been receiving support in various ways. Even five or six years ago, we had about 40 schemes working in this Institution but today we have 102 research schemes operating in this Institution and its affiliated Research Stations. I hope it will be possible for Mr. Shankar to spend a little time with us and see for himself the manner in which this Institution has been built up through nearly 75 years from its small beginnings in Saidapet and since it shifted in 1907 to Coimbatore. Only recently, the Minister for Agriculture has sent proposals for the conversion of this Institution into an Agricultural University. I do hope that Mr. Shankar will have an opportunity to see how far we have advanced in under-graduate training, post-graduate teaching and research, research not only in the headquarters of this Institute, but also in nearly

41 regional research stations established for some special purpose or other. The State Government of Madras has been supporting almost every research project and educational scheme which has emanated from this Institution right through from the establishment of this Institution. If this Institution which has been built up through so many years is not ripe for being transformed into an Agricultural University, it would be difficult to imagine what other Institutions would be. I may be excused in saying so, as I am talking not from any personal point of view, but from a historical point of view with regard to this Institution and the advanced stage of its evolution.

With regard to Dr. Cummings, I would like to express our thanks for the munificence of the Rockefeller Foundation in training our technical men in the special fields of Nematology and Virology in which we have not advanced very far in this country and for the gift of all the costly and specialised equipments required for establishing laboratories in these two fields including a pre-fabricated glass house. All this was largely due to the efforts of Dr. Cummings who had an appreciative understanding of the potentialities and needs of this Institution. We are thankful to him for all this and for finding time to be with us today and for being able to preside over the Second Annual Session of the Academy of Agricultural Sciences to-morrow.

With regard to Dr. Badenhop, I have already said that he represents the Technical Co-operation Mission and the group from the Tennessee University which has inter-institutional arrangements with South Indian Agricultural, Veterinary and Home Science Colleges. We are thankful for the facilities which Tennessee University has provided by way of technical personnel, equipments, books and facilities for our staff to be trained in U. S. A.

As President of the Madras Agricultural Students' Union, I welcome our Director of Agriculture, Sri Karthikeyan also to our midst here to-day. I would like to say that the Department of Agriculture is indeed very proud of a man like Sri Karthikeyan being the Head of the Department. His initiative, his dynamic energy, his sense of discipline, his broad and progressive views for developing the Department, all point to him as shaping to be one of our ablest civilians in the country. Though Sri Venkatesan, Secretary, Food and Agriculture is not present here on account of his many engagements, I, as the Head of the Institution cannot pass off without stating that but for his co-operation in all aspects, particularly connected with this Conference, it would not have been possible for us to conduct it in such a grand manner as we have attempted to do to-day.

Before I close, I would like to say a few words about the Madras Agricultural Students' Union which is celebrating its Golden Jubilee to-day. The Golden Jubilee of this Research Institute was already

celebrated in the year 1957. The Madras Agricultural Students' Union has grown with this Institution and the Institution has also grown with the Madras Agricultural Students' Union. The many ways in which this Union has associated itself with the activities of not only this Institute, but also that of the Agricultural Department in general are really unique indeed. The words "Students" in the name of the organisation is a misnomer. As our Minister for Food and Agriculture explained this morning at the State Farmers' Day, by "Students" in this particular context, we mean the 'Students' of Agriculture in the broad sense that they are interested in learning and continuing to learn all about scientific agriculture but not just students of the Agricultural College and Research Institute. Whatever may have been the thought behind the terminology, this Union has been serving the cause of Agriculture in the State and the country. It consists of research workers, extension officers, teachers in agriculture, leading farmers of the State and the present students. It has been one of the most unique and happy organisations in which students of this Institution both past and present come together on a common forum and work shoulder to shoulder for the welfare of their *alma mater* in particular and the future of agriculture in general. The Union not only conducts the College Day but also a series of conferences in which agricultural problems of all kinds are discussed, solutions suggested and policies recommended. The Government themselves have found these conferences useful and have fully supported and encouraged these annual functions. Our tributes must go to the many men who had the foresight to initiate an organisation of this kind to build it up through the years in the past and establish sound valuable traditions. One of the best things which the Union has done was to have started from its very inception the publication of the Madras Agricultural Journal. We are today celebrating simultaneously the Golden Jubilee of this Journal and in commemoration bringing out a special publication called "Trends in Agricultural Research", to which have contributed eminent scientists both within the country and from abroad and the manuscript of this commemoration volume is to be released today by Shri Shankar, Vice-President of the Indian Council of Agricultural Research.

I once again welcome all the distinguished guests and all those who have assembled here in response to our invitation.

Speech by Sri C. Subramaniam, Minister for Finance and Education,
Government of Madras.

Esteemed Colleague Sri M. Bhaktavatsalam, Ladies and Gentlemen,

While it gives me very great pleasure to participate in this function, I have to express on my own behalf my sense of deep disappointment that it has not been possible for the Union Minister for Finance to be present in our midst this evening. As it was mentioned by the Dean, he was held up because the air strip at Delhi was in a state in which the plane could not take off. As a matter of fact, he was very particular that he should visit this Institution and the function was arranged to suit his convenience; but we propose and something disposes and therefore we have to take these things as they come. Even if it had not been possible for him to be present here to-day, I am sure he is with us in his thoughts.

The Agricultural College here has been functioning from the year 1907 and during these 54 years it has done great service for the development of agriculture in our State in particular, and generally, to the agriculture in our country. But in the past, the Agricultural College was functioning in isolated glory. Many of the results which had been achieved in this College did not spread out and they were not being utilised by the ryots. But to-day, while the research work goes on in this Institution, the results of that research work are being utilised as quickly as possible by the ryots of to-day. I am sure that many of you would have gone through the Exhibition which has been organized in connection with this function. That exhibition demonstrates to us how it is no longer possible to carry on agriculture with unskilled labour and uneducated ryots. In the past, agriculture was the profession of anybody and everybody. If a person was unable to do any other profession, then he could take to agriculture and if a labourer is unable to do any job he can become a labourer in the agricultural field. But to-day, agriculture is becoming as scientific as any other industry. As a matter of fact, agriculture itself is a scientific industry to-day.

It is not only for the purpose of research that we require scientific apparatus of various types, but even for the purpose of carrying out agriculture in the fields, we require improved implements and improved techniques. If to-day we have made strides in the field of agriculture, it is because the agriculturist is also being educated in better methods of farming. That is why today Madras stands foremost in the field of activities.

Recently the distinguished Ambassador from America in our country gave expressions to the thought that for development in any field of human activity, education is the basic thing, and that unless there is education, no progress can be achieved. If we make an analysis of our

achievements in our country, we would find that in those fields where educated men have been participating, progress has been remarkable. In any field where the uneducated population are still the dominant factor, progress has been insignificant. Therefore it becomes necessary, even for the purpose of improving our agriculture, that we should spread education not only technical agricultural education but even general education amongst our agricultural population.

That is why we have taken upon the task of providing education to all our boys and girls whether they belong to villages or towns, whether they belong to agricultural sector or industrial sector. I am sure with this spread of education, the human factor will go on improving and when the human factor improves, the quality of human activity also improves. That has been reflected in our State in the field of agriculture also.

It is not enough if we have research stations. It is not enough if we have agricultural graduates. We should have trained farmers and trained agricultural labour. That is why we have now started the Pilot Project for training our agricultural labour also and for that purpose we have started during this year six agricultural schools in the State. I am sure that ere long it should be possible for us to have many more such institutions wherein our small farmers and agricultural labour also would get the benefit of training and education. It is only with such a background that it would be possible for us to undertake scientific agriculture which alone would yield greater and greater results.

It is ignorance which stands in the way of greater production. Knowledge is power. Whoever imagined that a tiny atom would contain within itself so much of energy which, when released, would destroy the whole world? If an atom contains within itself so much of energy, then, we can very well imagine what nature on the whole contains. Many secrets await to be discovered by us; and to be tapped by us. There is a glorious future, particularly for the younger research workers who will be taking to the field of scientific research in the fields of agriculture, industry, medicine and various other fields. I have no doubt in my mind that it should be possible for us to discover new secrets of nature which would contribute to the development, of particularly agriculture, in a much greater way.

I am glad to find that in this Institution many new discoveries have been made, new strains of paddy and various other crops have been developed. I am sure that if we progress in the same way in which we are going, this Institution would not only serve our State and our Country but will be able to radiate from this Institution the knowledge which would benefit the whole humanity. For that, we are indebted to the succession of the Heads of this Institution and we are glad to have at this juncture Dr. Krishnamurthi as the Head of this Institution.

It is not only the Heads of the Institutions who contribute to the success of an institution like this, but also all those who work in this Institution. To them also we owe a debt of gratitude. I am sure that this generation of research workers pursue their work without expecting any immediate reward but engage themselves in this activity, because they find that knowledge does not only give power, but such knowledge also gives pleasure and excitement. That is why we find thousands of research workers coming forward in the world to-day to undertake this task even though they may not immediately be benefited by what they are able to achieve.

Dr. Krishnamurthi was good enough to mention that in the recent years, we have improved the pay scales of the workers and officers in the Agricultural Department. That was a thing which was long overdue (Applause). I am glad that it has been possible to achieve something in this direction during my regime as Finance Minister and what we have done is only the beginning (cheers).

More has got to be done to these technical men. Unfortunately till recently, we always glorified the administrative service which is ably represented by my good friend Mr. Shankar here. No doubt, they have done a good job, particularly after the attainment of freedom and they have provided the steel frame of the administration. They were the steel frame of the British administration also, but after freedom, they transformed themselves into steel frames of Independent India and at this juncture, I would like to express my appreciation of the country for the great services rendered by the civilians. But still, my own view is that our technical men should also get a high place of honour. They should get higher priority and that would be the index of progress. Unfortunately we are still perhaps taken in by administrators whether they be Ministers or other administrative Officers. Only when we shed this glamour for administrative power, only when we learn to appreciate the qualities, the excellence and the inevitable service, which the technical men have got to provide, that will be a sure mark of progress in our Society. That transformation is taking place steadily though slowly. I am sure that within the next generation, this transformation would have been completed. Particularly the younger generation should realise that it is not the politicians who contribute to the growth and development of the country, and that it is not the administrators who provide the developing force in the community. Real developments can take place, only when there are properly qualified and trained technical men in the various fields. Therefore we should produce experts in the fields of agriculture, medicine and other fields of technology, engineering in general. It is only when we produce more and more experts in these technical fields that it would be possible for us to rank amongst the progressive nations of the world. Therefore the younger generation, I am sure, will keep this in mind.

It is to provide many amenities in this Agricultural College that our Minister for Agriculture has striven during his tenure as Minister for Agriculture. When he took over this office of the Minister of Agriculture, many put the question why he is not taking over his usual portfolio of Public Works. Then, I gave this explanation, viz. that during his tenure as Public Works Minister, he had built up many reservoirs and many irrigation projects and it is only logical that he should see that the water is properly utilised (Applause), so that out of water which had been made available, maximum yield could be produced by our ryots. What I expressed at that time has been proved to be true and during his tenure as Minister for Agriculture, he has shown to the whole of India that in spite of the many handicaps, particularly that of illiteracy, amongst the agricultural population, in spite of the fact that we do not have skilled labour in the field of agriculture, it is still possible for us to make striking progress. We are all proud when we meet in the National Forum to declare that even in the field of Agriculture, Madras stands foremost. In yield per acre in many of the commodities, we hold the record. This has been due to the untiring efforts of the esteemed Agriculture Minister. I am sure what we are doing today in honouring him by unveiling his portrait is only a token of our appreciation. Many of the things which have been done by him all these years will yield even greater results in the coming decade and would last for decades after that, and I am sure that the coming generation would pay their humble homage to our esteemed Agriculture Minister as the pioneer who set up a new history in the development of our agriculture in our State.

I have known him for a pretty long time before he became the Minister, as one of the freedom fighters for our country. From that day onwards, I have found him an honest and sincere worker for the progress of our country. After the attainment of Independence, he has had a very distinguished career in the field of administration. I think he is one Minister who has been functioning in almost all the ministries in our State (Applause) and that only shows that he is, if I may use the term, a "Multipurpose Minister". Give him any job, he will make it a success, even under the most difficult circumstances. Not only that, if I may give out a secret, whenever we find ourselves in difficulty to solve any problem, even in the political field, we always turn to him and he is quick with the solution which we put to him. We are all proud of him and I am particularly proud of him as my colleague. I hope that we will have many more years of his useful service for our State and for our country. It has given me very great pleasure to unveil his portrait.

I have also been asked to declare open the Library Building on behalf of the Union Minister for Finance. It is rather very difficult to deputise for him but still it could not be avoided and I am happy to declare open this Library Building. In the field of agricultural education,

Library has to play a unique part. The days are gone when everything used to be taught to the students by the Professors. Now the teacher is only a guide for the purpose of showing the way to the students as to how to acquire knowledge and how to acquire the necessary training. Library has thus to play a vital role in the field of education to-day. Therefore I am glad that we have this beautiful Library Building and I am sure that the building is not only a beautiful one, but it is useful. Not only are many valuable books found here but they are also used properly and constantly. Sometimes we may have volumes in our library but no student may go anywhere near these, but it is not the case as far as the Agricultural College is concerned. If it had been the case that these books have been kept untouched, then, the Agriculture College could not have reached the place of eminence, which it has done in our country to-day.

There is a third job which has been assigned to me, which is the naming of the Post Graduate Hall and no better choice could have been made than that of the esteemed Minister Mr. M. Bhaktavatsalam. So with very great pleasure I name the Post Graduate Hall as "BHAKTAVATSALAM HALL" (Applause). This portrait and the naming of the hall, I hope and trust, would be an inspiration to the present generation, and the coming generations to toil hard and to strive hard, to achieve results so that not only the present generation but the future generation also would be benefited.

It has given me very great pleasure to participate in this function and before I conclude, may I wish the students of this College who are celebrating their 50th anniversary of the Madras Agricultural Students' Union and also the 44th College Day every success in their future efforts. I am sure that all of them would get through their examinations, both in the coming examination and the examinations to come. But that is only the beginning, because ultimately the success depends upon what they are able to achieve in their various positions which they would be occupying later on. May I wish them a very distinguished service for the benefit of our Motherland.

Mr. Dean and dear students of this college, and members of the staff of the college, I am particularly thankful to you all for having given me this opportunity to participate in this very pleasant function.

Speech by Sri M. Bhaktavatsalam, Minister for Home and Agriculture.

My esteemed colleague Sri Subramaniam, Shri Shankar, Mr. Director, Mr. Dean and President of the Madras Agricultural Students' Union, Dr. Cummings, Dr. Badenhop, distinguished visitors, Ladies and Gentlemen:

At the outset, I should like to convey to you our Union Minister Shri Morarji Desai's keen sense of disappointment that he has not been able to be here to participate in this function. He was talking to me by phone this morning and he mentioned to me that he was very much disappointed than we are. He has asked me to convey to you and to the Madras Agricultural Students' Union and to the Institute warm greetings and his best wishes for the success of this function.

I am thankful to the Madras Agricultural Students' Union for their invitation to me to inaugurate the Golden Jubilee celebrations of the Union. I appreciate the honour which this Union has conferred upon me in presenting a portrait to be placed in the Central Hall of the Post-Graduate building. I am also grateful to my esteemed colleague, Sri C. Subramaniam, Minister for Education and Finance for the kind words which he has expressed about me. The many accomplishments and developments in Agriculture would not have been possible without his co-operation as Finance Minister.

I must at the outset state that I consider it a privilege that I had the opportunity as Minister for Agriculture to serve the Madras State for the last ten years in a field, economic development of which is of the greatest national importance. Many developments have taken place in agriculture in the Madras State through the First and Second Five Year Plans, a large part of which is in tune with the pattern set for the country. It is a matter of satisfaction that the Government of Madras have been able to successfully implement almost all the programmes and fulfil the many targets in the First and Second Five Year Plans. In the First Five Year Plan, the Agricultural Department concentrated their attention towards increasing food production and in doing so the emphasis was on the use of improved irrigation facilities, improved seeds, intensive manuring, reclamation of waste lands, plant protection of pests and diseases of crops, etc. The various measures undertaken resulted in the increase in food production by 5.82 lakh tons at the end of the First Plan. In the Second Five Year Plan, the intention was to gear up agricultural production not only to meet the internal consumption, but also to have a surplus stock to meet emergencies. To achieve this, intensified attention was given to the supply of green manure seeds, multiplication and distribution of improved seeds of paddy and millets, manufacturing of rural and urban composts, plant protection, improved agricultural practices, lift irrigation, land reclamation and soil conservation, etc. By the end of the Second Plan, the State had achieved an actual increase

of 9.03 lakh tons. The increase would have been even greater, but for certain serious obstacles such as shortage in supply of fertilisers, difficulties in procurement of tractors and other mechanised equipments due to the restricted import policy of the Government of India and adverse seasonal conditions in certain districts of the State. Under the Third Plan it has been decided that the food grain production of Madras State should be increased by another 16.54 lakh tons which represents an increase of about 34 per cent over and above the level of production at the end of 1960-61. The increase mentioned above is proposed to be achieved by increased application of nitrogenous and phosphatic fertilisers, application of green manure and compost, improved seeds of paddy and millets, intensifying the schemes for sinking artesian wells, bore wells, filter points and supply of electric motor pumpsets, soil conservation activities, major and minor irrigation schemes. For rapid multiplication of seeds of improved strains, 134 State Seed Farms have already been established and another 76 Farms are proposed to be initiated in the Third Five Year Plan. It is not only the food crops which would receive intensified attention in the Third Plan, but also the commercial crops such as oilseeds, cotton and sugarcane for which agriculture of this State is well known, so that this may be helpful in augmenting our earnings of foreign exchange through exports. In order to provide protective foods such as fruits and vegetables within reach of the masses in larger quantities than in the previous Plan periods, schemes have been put into operation in the Third Plan for extending the area under fruits and for intensifying vegetable cultivation. Improvement of the existing orchards so that they are more productive, provision of both long and short term loans, strengthening of staff to provide more intensive technical advice to the growers, and increase in the number of model orchard-cum-nurseries to provide larger number of good quality fruit plants are all proposed under the Third Plan. Rejuvenation of 40,000 acres of old orchards and planting 5,000 acres of new orchards are programmed. It has also been realised that cashewnut, an important dollar earner, should not be neglected and a special technical officer has been attending to the development of this commodity and it has been programmed under the Third Plan to increase the area under this crop by another 10,000 acres. Experience has shown that soil conservation measures are effective in improving production and therefore a large programme of soil conservation has already been implemented in the Second Plan extending to a total area of 1,31,348 acres, and it is proposed in the Third Plan to cover an area of 4 lakhs of acres under dry-farming, which include 0.10 lakh acres in hilly areas and 3.30 lakhs acres in the plains. The index of achievements in the agricultural plan is reflected in the higher average acre yields obtained in the Madras State. For instance in rice, the Madras average is 1,345 lb. as against the All India average of 905 lb., in *Jowar* it is 638 lb. as against 363 lb., in *Bajra* it is 513 lb. as against All India average of 209 lb. and in Groundnut (pods) it is 1,042 lb. as against 690 lb.

It is obvious that a large part of success of the programmes in agricultural development has depended on the field application of valuable results obtained through research at the Agricultural College and Research Institute, Coimbatore as well as at nearly 41 Research Stations affiliated to this Institution and spread over the different regions of the State. The evolution of improved strains by research has been a major contribution to the increase in production as well as the valuable findings of better agronomic practices, fertiliser schedules, more efficient plant protection methods and introduction of new varieties and types and intensive horticultural work with regard to fruits and vegetables, etc. Because of the many achievements of the Agricultural College and Research Institute through the several decades of its existence, I have been pleased to have been associated with this Institution whose work has been recognized both within the country and abroad.

The rapid developments and expansions which have taken place in this Research Institute through the First and Second Five Year Plans have been phenomenal. At the commencement of this Institution in 1907, there were just three specialists in Agriculture, Economic Botany and Chemistry respectively and today there are 21 specialists dealing with different crops and disciplines and apart from these, we have professors placed in a higher category in six major fields. Though even in the past, this Institution had undertaken training of post-graduate scholars for the higher degrees of M. Sc. and Ph. D., a separate regional Post-Graduate Centre was established in 1958 when no less a person than the President of the Union of India, Dr. Rajendra Prasad laid the foundation stone for the new Post-Graduate Block. While there were a few research schemes which were operating at this Institution some years ago, nearly 102 research schemes are being handled at present. Certain important aspects of work which have not received attention elsewhere are at present being specially cared for in this Institution. For instance the Government of Madras have established new Divisions of Virology and Nematology and have also sanctioned a Radio-isotope laboratory. It is only recently that the importance of study of virus diseases and nematodes has been realised and the Government of Madras deputed experienced officers to the United States for training in these fields with the special assistance from the Rockefeller Foundation who have also been pleased to provide all the necessary equipments and glass-house facilities for the establishment of the most modern units in these fields at this Institution. The single most important body which has been helpful in building up research and education in this State is the Indian Council of Agricultural Research. It is very appropriate therefore that Shri V. Shankar, Vice-President, Indian Council of Agricultural Research is present with us and has taken interest in participating in the functions to-day. I notice also the presence of Dr. R. W. Cummings of the Rockefeller Foundation and Dr. Badenhop from the T. C. M. The State Government recognise

and appreciate the contributions which the organisations whom these gentlemen represent have made towards the progress of this Institution.

One of the weakest links which had been existing here as anywhere else in this country was the gulf between research and the farmer. The Government of Madras therefore considered it necessary that the Division of Agricultural Extension should be established at the Agricultural College and Research Institute for giving intensive practical training to undergraduates in methodology of extension and in the correct approach to the farmers and also to set as a liaison between the research and extension wings so that the results of research are properly processed for transmission to the extension wing and to bring the problems of farmers and the extension workers to the Research Institute for their solution. The Government of Madras on their own initiative have undertaken fairly large expansionary activities in research, by upgrading five regional research stations with a full complement of staff in the various disciplines such as Plant Breeding, Agronomy, Soil Science, Entomology and Mycology and Plant Pathology so that the regional problems are given even greater attention, at the same time releasing the pressure on the centre at the Agricultural College and Research Institute in Coimbatore. A second Agricultural College will also be established in the Third Five Year Plan.

The Government of Madras have been deeply interested in every modern development in the field of agricultural research, education or extension. This Government have only recently formulated proposals for the establishment of an Agricultural University with this Institution as a nucleus and it is hoped that it would be possible for the Government of India to recognise this Institution for this purpose, because of the advance which has been made in respect of under-graduate training, post-graduate work, established standards of research and well organised extension and above all a team of highly qualified technical personnel.

In all the activities of education, research and extension, the Agricultural College and Research Institute in particular and the State Agricultural Department in general have had, consistently for the last fifty years the co-operation and assistance of a well established non-official organisation which has been called the Madras Agricultural Students' Union. While the name "Students' Union" is somewhat misleading, those who have known this organisation are aware of the fact that the "M.A.S.U." as it is popularly called, consists of the *alumni* of the Agricultural College, the students currently undergoing their training here, the teachers, research workers and extension staff of the Department and a large number of farmers of the State. This organisation has thus been from the very beginning a forum for a cross section of all those interested in agriculture coming together for the

improvement of agriculture. In the very early years after establishment of the Agricultural College at Coimbatore in 1907, this organisation was established in 1911 and is only appropriate that we pay our tribute to those who conceived the idea of a unique association of this kind. From 1911, this Union has been responsible for organising the annual functions at the time of the "College Day" where not only attention is focussed on the work of this Agricultural College and Research Institute but also a series of conferences are organised on topical problems of agriculture and policies are formulated in association with the Government Department of Agriculture. This organisation has maintained the tradition of holding the annual conferences for the last fifty years except for a break of a few years during the war periods. It is significant that the Madras Agricultural Students' Union has been in existence long enough to have seen both the world wars. Besides holding these annual conferences, this Union has taken upon itself the responsibility of publishing the Madras Agricultural Journal to disseminate information on scientific agriculture. It is noteworthy that the need for bridging the gulf between research and the farmer was fully realised even fifty years ago by the Madras Agricultural Students' Union and it is highly creditable that a non-official organisation has been responsible in conducting a journal of this kind year after year uninterruptedly for the last fifty years. In doing so, it has to a very significant extent lessened the burden of State Department of Agriculture which normally would have found it necessary to undertake a publication of a journal of this kind. It is this realisation on the part of the Government of Madras which has resulted in awarding annual subsidies to support the activities of this Journal. Having been closely acquainted with the activities and achievements of the Madras Agricultural Student's Union, it gives me great pleasure to be associated to-day with the Golden Jubilee celebrations of both Madras Agricultural Students' Union and the Madras Agricultural Journal and to inaugurate this Golden Jubilee. I do so with great pleasure.

I now turn to the other task of laying the foundation stone for the Agricultural Training College and before I do so, I would like to say a few words on the genesis of this new Institution to be operated in the Third Five Year Plan. The Madras Government have been among the earliest to realise the importance of teaching agriculture in both the secondary schools and in the basic schools. The number of schools which have included "Agriculture" as a subject of study in their bifurcated courses have been increasing rapidly. In this connection one of the recent developments is the establishment of a number of agricultural schools of a new type by the Department of Agriculture. The concept of this type of agricultural school was a result of the visit of our Minister for Finance and Education to the United Kingdom recently, where he studied the organisation of agricultural schools for those who actually work on the lands. Six such schools have been started in the Madras

State last year and it is proposed to add six more in the year 1962-'63 and to progressively add more such schools so that every taluk in the Madras State will have ultimately an agricultural school. The broad objectives in these Agricultural Schools are to see that men who actually work on the land are given practical training for a whole year in all aspects of improved agriculture so that after they return to the land, they would provide leadership for better production methods in agriculture.

With all these developments, the situation with regard to technical personnel required to teach agriculture particularly in the secondary schools where agriculture is a subject of study has been a matter of anxiety to the Government. The number of agricultural graduates required to man the Plan Schemes, in spite of increasing admissions to the existing agricultural colleges and establishment of new colleges, has been totally inadequate. Moreover, the agricultural graduates have not been inclined to work as teachers in high schools because neither the salary offered in the schools nor the scope for professional advancement has been attractive to them. The only alternative therefore is to train science graduates working already in the secondary and other schools in Agriculture or recruit science graduates for this special purpose and give them an intensive training in agriculture in a separate Agricultural Training College. The scheme for establishment of such an Institution includes also the training of secondary grade teachers who have to handle agriculture in the basic and elementary schools. The scope for other activities in such an Agricultural Training College is also immense. It can serve as a centre for In-service Training for Extension Officers and District Agricultural Officers and other technical personnel from other wings of the Department of Agriculture. It can also eventually provide training in administration to the Agricultural Officers of the Department and open up facilities for research in methodology of teaching in agriculture for the improvement of teaching in the professional agricultural colleges. It is understood that the Government of India through the Indian Council of Agricultural Education has also been formulating programmes for such training colleges to be established on a regional basis. It is a matter of pleasure to the Government of Madras that they are already accomplishing the establishment of such an Institution even in anticipation of the Government of India. It is hoped that the Government of India will give this Institution every encouragement through necessary financial grants for its further growth taking cognisance of the financial commitments which the State Government has already made in the furtherance of a worthwhile objective.

I have now great pleasure in laying the foundation stone for this Agricultural Training College.

Speech by Shri V. Shankar, I. C. S. releasing the Commemoration Volume and inaugurating the College Day and Conferences.

On behalf of the Indian Council of Agricultural Research and on behalf of the Government of India (Ministry of Agriculture), I am very happy indeed to associate myself with what is virtually a package programme of big events, each one of which is devoted to the common service of agricultural science and practice. I am particularly grateful to the Dean, for having afforded me an opportunity of fulfilling a long cherished desire of visiting Coimbatore. But for his persuasion and persistence, perhaps I would have excused myself.

Coimbatore is a name famous in the annals of agricultural history. Even as a student of Indian Economics more than 30 years ago, the name Coimbatore cropped up quite often in connection with agricultural research, particularly breeding of improved varieties in agricultural crops. To this pioneering work, reference has been made by Dr. Krishnamurthi in the material that he was good enough to supply to me and the work at Coimbatore has made agricultural history during the last 30 or 35 years. The victories of science against poverty, misery and disease in the field of agriculture, have often been won in the laboratories of this great institution in the midst of which we are celebrating the events of today. I am very glad that despite the vagaries of weather, I have been able to come here and associate myself with the celebrations. To that extent, today for me is a day of an opportunity as well as fulfilment.

Sri C. Subramaniam has referred to the important place which Madras State has occupied in agricultural production in this country. I would like to associate myself fully and wholeheartedly with the claims that he has made. It is entirely due to the progressive nature of agricultural administration of this State and the far-sightedness and practical and business like approach of those, who were at the helm of affairs. A sustained record has been maintained during the last several years, under the practical, progressive and well directed leadership of your distinguished Minister for Agriculture, who has several milestones to his credit. When the history of agriculture of this country comes to be written, I am quite sure that it will contain references to those achievements to a very large extent.

The fact that those achievements have been possible is also a tribute to these distinguished scientists and technicians and highly technically qualified staff of this institution, to which Sri C. Subramaniam referred earlier. I would heartily endorse also the great tributes that Sri C. Subramaniam and Sri M. Bhaktavatsalam have paid to the staff and to the Agricultural Department in this State and also to the various heads of this institution who have contributed to the success of agriculture in Madras.

In this programme I have been assigned three events. It rather reminds me of that famous brand of ice-cream, three-in-one. But I can assure you that it is as sweet a task as taking that brand and even though it has been a very brief acquaintance with this institution, I have read and heard enough of its achievements to justify the faith and hope that Sri Bhaktavatsalam has expressed in its future. Primitive man's occupation of hunting, passed into the twilight of civilisation, typified by pastoral pursuits and subsequently into civilisation itself symbolised by agricultural occupation. Agriculture has been constantly evolutionary. Nothing could typify evolution better than the manner in which our two principal commodities viz. wheat and rice have grown from their original wildness to the multiplicity and quality of varieties that we all partake today. Similarly if we look at the evolution of fruits into so many varieties from their original existence, we will realise how unseen through the influence of practical agriculturists, agriculture has blossomed forth into the wide range that it occupies today. In this country unfortunately, during the period of unsettled history between the beginnings of the 18th century and the third part of the 19th century, we underwent an eclipse of activity and agriculture became subject to the dead weight of traditions and dreary habit. To quote the words of poet Tagore, during this period, that "clear stream of reason...had lost its way in the dreary sands of dead habit". Fortunately for us, thanks to the institutions like the one at Coimbatore, the events of which we are celebrating today we came out of neglect, and apathy and gradually by the twenties of this century, we began to establish ourselves scientifically in the field of agriculture. Since 1920, research and education have progressed but it is only during the last decade that extension activities, which are acknowledged as so necessary for the successful implementation of research have come to their aid. Today we have reached a stage when we cannot but think in terms of complete integration between research, education and extension. It is to my mind a tribute that you have organised the activities in this institution with such integration in mind. Whilst this concept is dawning on everybody only today with such force, it has actually been practised in this institution for the last several decades. I am very glad therefore that, like Johny Walker born in 1870, this institution, born in 1876, is not only growing strong but is growing stronger. What is better, poor Johny Walker is a *persona non-grata* to-day, but, this institution is universally popular and I am quite sure under the able guidance of its head, it will grow from strength to strength and will continue to render eminent services not only to the agriculturists and agriculture of this State, but to the agriculturists and agriculture of the Country at large.

I shall now briefly refer to the three principal items which have been assigned to me in to-day's scheme of functions. The first one in serial order, but not necessarily in order of importance, is the release of

the special publication "Trends in Agricultural Research" in commemoration of the Golden Jubilee of the Madras Agricultural Journal. Even though in the life of an individual, 50 years mark in some respects, the transition from a state of usefulness to a state of deteriorating utility and an approach to senility, in the history of an institution, 50 years of uninterrupted progress is a matter of congratulation and praise. I tender my congratulations particularly on the enviable record achieved and my prayers for a future as bright and even brighter than the past and for future service to the community and to science. In this spirit of congratulations and praise, I am happy to release this commemoration volume with just a few words. It is a volume of international collaboration of notable authorship, dealing with the various facets of agricultural science and practice in which a student of agriculture, as well as a practical farmer, will continue to find inspiration for years and years to come. Dr. S. Krishnamurthi was good enough to send an advance copy of this very bulky volume and I was able to glance through some of the distinguished names who have lent themselves to the various articles which have been incorporated in this volume and I looked up some of the important articles contained in it. It is not only a mine of agricultural information but, to my mind, it would also be an encyclopedia of references so far as agricultural progress and developments are concerned. With these few words, ladies and gentlemen, I am very happy to release this commemoration volume in connection with the Golden Jubilee of the Madras Agricultural Journal (Applause).

The second item assigned to me relates to the inauguration of the 44th College Day. An annual day in the history of an educational institution is a day of commemoration and dedication. It is a day of commemoration because naturally, on that occasion, our minds go back to the history and traditions of greatness which are enshrined in brick and mortar in the buildings in which we seek the fountains of knowledge. It is a day of dedication, because proud of those traditions and proud of that history, we will look forward to a prouder record of this institution and imbibe the spirit of service that the institution inspires. This College, as I have already indicated earlier, has a long history dating back to 1876. Even as a college, it has a stand of fiftyfour years. We have progressed eightfold in the period of 41 years if we take into account the admissions in 1920 when the college was formed and the admissions to-day. It is a notable record of progress in itself. But if we add to that, the progress that has been achieved in research and other activities indissolubly associated with this institution, I am quite sure that you will endorse fully any claims for recognition of its merit which are made either from this platform or outside. You have reason therefore to be proud of this institution and you have also every reason to pledge yourself to be worthy of it in your future years of life and in your future years of service.

The third item in which I am asked to participate is the inauguration of series of conferences, the institution of which I think is unique. In fact, this is the first time that I have come across not only an association of conferences with such great events in themselves, but also conferences dealing with diverse aspects of a vast subject such as agriculture. We have firstly the Second Annual Session of the Academy of Agricultural Sciences under the distinguished presidentship of my friend Dr. Cummings. You have already heard from your Dean what an interesting and charming personality Dr. Cummings is. He combines in himself the wisdom of a scholar, the maturity of experience and the profundity of knowledge. What is more, he has that intensely practical outlook and approach to problems and he is ambitious for results and achievements. I am quite sure under his distinguished presidentship, the Second Annual Session of the Academy of Agricultural Sciences will be a great success.

The second conference is that of the Departmental Officers who would be pooling their thoughts and experiences in order to avoid the dangers and bottlenecks of the past and streamline the various activities for successful action in future. I wish their deliberations every success, because that success is vital not only for the progress of agriculture in this State during this year and in years to come, but also ultimately for the country at large.

The third conference is the conference of Agricultural Engineers. Although in agriculture, engineering is a vital link and a vital arm, nothing is more condemnatory of our neglect of agriculture in the past than the serious shortage in the realms of Agricultural Engineering which we are experiencing to-day. I am glad that the Agricultural Engineers would be meeting together to shed some light on the rather difficult agricultural engineering problems which are facing the country and this State.

The last conference is the Council of Extension workers which would be meeting on the last day of these deliberations. I have already told you that the place of extension in the scheme of agriculture has been only recently recognized. With such a vast population to cover, with its varieties of education, backwardness and poverty the task of an extension worker is an unenviable one. Extension is a problem not only of science but also of practice and psychology. It is the extension worker who ultimately sells the results of science to the agriculturist. On one side he has to describe the wares, and on the other, he has to sell these wares to those, a majority of whom have not the money to buy them. In such a situation I well realise the difficulties of the extension worker. But those difficulties cannot be solved until we have solved the problem of poverty of more than two thirds of our agriculturists. Research and extension can deliver their goods in this country only when

we have placed money in the hands of the low income farmers, the means of utilising the fruits of research and science and in that sense of course, the problem is one which must await a long term solution. But even within this limitation, the extension worker has a large field of education to cover. His is a task of persuasion. His is a task in which he has to show a complete knowledge of his subject and at the same time a complete understanding of the difficulties which confront the farmers. I have no doubt that the deliberations of this class of workers would also be useful in framing agricultural policies and methods in this State.

Ladies and gentlemen, according to my own light I have completed the tasks which were assigned to me. It only remains to me to say once again how educative my association with to-day's functions has been and how much interest and instruction I have now sought in it. The commemoration volume "Trends in Agricultural Research" which the Dean has been good enough to send me would be a permanent record of this happy association. But apart from that, I can assure you that in so far as and for so long as I am allowed to deal with matters with which this institution is concerned, I shall always pursue with interest and avidity its future and make whatever little contribution I can make to ease its difficulties and promote its activities.

Thank you.

Vote of thanks by the Director of Agriculture, Sri V. K. Krishnan, I. A. S.

Hon'ble Minister for Agriculture, Mr. Shankar, Dr. Commings,
Dr. Krishnamurthi, Dr. Badenhop, Distinguished Ladies and Gentlemen:

We have practically come to the end of this package programme of functions, as Mr. Shankar put it. It is only appropriate that he himself presided over the package of programmes, as he is in charge of package programmes for wheat and paddy, and is shortly to sanction the package programme for groundnuts. I am extremely happy that this package of programmes has gone through very well, right from the morning upto now. Barring the dinner, there is only one more item i. e. entertainment after the dinner. The remaining three days are also packed with a number of conferences and meetings, each important in its own way, different people participating and presiding.

On this occasion, it is my proud privilege and pleasure to propose a hearty vote of thanks to all who have gathered here and to the distinguished persons who have actively participated in these functions. I join one and all of you in expressing disappointment at the inability of Mr. Morarji Desai to be present here as originally scheduled. We were looking forward to his presence with great eagerness, pleasure and expectation, and we were indeed, very deeply disappointed. But there was nothing we could do about it and thank God, that with the help of our State Finance Minister, we have been able to get on with the function. I am sure that with the informative material which we have been able to furnish him previously and with the possibilities of his visit here on some other future occasion, the Union Minister for Finance will be able to appreciate the work that is being done here and that is sought to be done here in the future.

Now, Sir, I am not entering into any argument or controversy about the administrators and the scientists. But just a fact I would like to mention - that the progress of the department, which has been recorded, and which everyone has described as phenomenal, relates also to the last fifteen years or so during the major part of which the Directors of Agriculture have been from the administrative service. And therefore, the administrative service has had as much to do with the progress of agriculture as the specialists and scientists. I am not at all decrying or reducing the importance of scientists. Administrators and scientists are complementary and together we have been doing extremely well in this State, with absolutely no kind of illfeeling or superiority complexes. To all the Ex-Directors of Agriculture and to all the Specialists, Experts and Scientists, whose work has been described as top rate so deservedly by every one gathered here, I have to express my thanks on behalf of the department and Government for all the good work and service rendered.

As for the distinguished persons who are present here today, I would first like to thank our President of the evening, our Minister for Education and Finance. He has fulfilled a number of functions today. He made an inspiring speech and exhorted us all to further efforts. And not only that, while it is said that it is very difficult to get through a scheme through the finance department, however as far as the Agriculture Department or the Agricultural schemes are concerned, our experience has been the other way. We did not find any good scheme, any scheme which is practical and would achieve results within a given time, suffering for want of support at its hand. Every time we went up to the Finance Minister with any new scheme, irrespective of the cost, he only looked at the practical aspects of it, where and how results would be produced, and once we convinced him that it was a good scheme, we got the sanction in no time. But for his support and guidance, these massive buildings, these impressive structures and all the equipment, a number of stations, and expanded staff, which the department is today having, could not have become a fact. And for his great support, appreciation of the work of the department, its problems and for all the functions he has fulfilled today, I extend my very sincere thanks, to him in my personal capacity as well as on behalf of the whole department.

Sir, next I must express my very sincere thanks to our Minister for Agriculture. As you know, a scheme has got to be initiated first by the men who face the problem, then by the field staff and later by the Head of the Department and it has got to be processed and put up to the concerned department at the Government level and then the Secretary and Minister have got to appreciate and approve it. Then it passes on to finance. The first stage of examination - the first stage where support is needed, where appreciative help is needed - is at the administrative departmental level. Here we have had the support of our beloved Minister for the past several years - ever since he has taken up his portfolio - in an abundant measure and never did we find him failing us or turning down any progressive proposal. He gave us words of encouragement at every function he has been associated with in this department at the State level, regional level, village level or block level. He never passed a remark that could wound anybody or passed a remark that could discourage anybody. He always upheld the good work done by the department. But for his support and continued encouragement, the Department could not have achieved much. He has been working rather heavily today. We have given him a number of functions. He sat through patiently in the morning, through the Farmers' Day, which was by itself a record for the whole department of agriculture and even for Coimbatore. About one thousand farmers from all over the State, brought from different blocks and from different districts, had come here like on a pilgrimage, in special buses, prepared to stay for even two or three days to see the exhibition and the various functions and participate

Vote of thanks by the Director of Agriculture



in them and go back with a sense of realistic appreciation of what the department is doing in research and teaching. When we put facts in cold print in administrative and other reports, people are not so easily convinced as they have been today. The exhibition was, a good eye opener. In fact, out of the farmers who came and attended the State Farmers' Day this morning, I find that a good number of them are not here at this afternoon function. They are all in the exhibition hall now.

Our Minister patiently presided over the morning function (State Farmers' Day) and made an inspiring and interesting speech, which is of great practical value to the farmers as well as to the Department. In this afternoon function, he inaugurated the Golden Jubilee of the Madras Agricultural Students' Union, laid the Foundation Stone for the Agricultural Training College and also distributed the prizes to the winners in the college courses. We owe him a deep debt of gratitude for his continued support and guidance and the personal relationship he has maintained with all officers of the department. That is really highly praiseworthy. We are highly grateful to him for that great personal touch which makes everybody at home, putting every man at ease. We hope we will have this pleasure and privilege continued in the years to come. I wish to thank him once again for all that he has done to the Department and particularly for the various engagements he has ably fulfilled today.

Then, Sir, I thank Mr. Shankar. I feel a bit of embarrassment, because he is a senior officer of the Civil Service and as a junior Administrator, I should not wax eloquent on his qualities. Just for a year, I have been associated with this department and I have met him in a few of the meetings and conferences as Chairman of most of the commodity committees set up by Government of India and as Vice-Chairman of the I. C. A. R. And all these meetings no doubt, were short and brisk, but excellent business was done. The drive and dynamism, the quiet efficiency and the way he always looked into the matter from the practical point of view and wanted results to be achieved without wasting words, these are all qualities which every Civilian or Administrator has to learn and I have benefited by the association. He has been kind, inspite of his personal inconvenience, to come all the way from Bombay, then release the commemoration volume "Trends in Agricultural Research" which, he has described very aptly, as a first class international collaboration, containing topical subjects written by eminent men. The very names appearing in the book lend great charm and value to the book. He is the appropriate person for releasing such a publication since he is in the Indian Council of Agricultural Research of which he is the administrative head, to control and guide research and to encourage and assist in dissemination of results of research. As such he is the proper person to release this publication. He has also been good enough to inaugurate the College Day and the series of conferences on agricultural matters

administrative and scientific and to say a few words bringing pleasure and credit to the department and to its officers. This is a big gathering in which departmental officers, farmers, technicians, scientists and many others have all gathered and the views and encouragements received at such an occasion are bound to provide further spurt to greater activity, because, though we have already achieved a good deal, a good deal has yet to be achieved. I thank Shri Shankar once again for all the help he has rendered and for having so kindly agreed to participate in this function and for having so ably fulfilled his responsibilities at this function.

Then I have to thank Dr. Cummings of the Rockefeller Foundation. Mr. Shankar knows him so well and he has described him so finely that it is superfluous for me to touch on his personal aspects. I have met him on one or two occasions in connection with the establishment of Agricultural University in the Madras State. He is the chairman of the Committee set up by the Government of India for establishment of Agricultural University and his views and advice have been highly helpful to us in that connection. No doubt, no final decision has yet been taken, but I hope that Madras will have an Agricultural University. For all the help and assistance the Rockefeller Foundation has extended to us, we are highly grateful to them. They have trained our technicians; they have given us a good equipment; and they have helped us in every way. We are highly grateful to him for having consented to preside over the Second Session of the Academy of Agricultural Sciences, tomorrow.

Then I must thank Mr. Badenhop of the TCM. The TCM, year after year, has been helping us to send a number of scientists to the United States for higher technical training and studies. They have also supplied us valuable scientific apparatus and instruments and helped us with technical personnel. He represents the TCM locally in India and we have always found him highly interested in Coimbatore Agricultural College and its objectives. I thank him whole-heartedly for being present here and for all the help rendered.

Then, Sir, I must thank Mr. Srinivasan of the Farmers' Forum who addressed the farmers during the morning's Farmers' Day at our invitation. His speech was highly useful and I am grateful to him for the trouble taken.

Now, I want to thank particularly the P. W. D., the Chief Engineer Mr. Abraham, Superintending Engineer Mr. Namasivayam, the local Executive Engineer Mr. Thirugnanasambandam, Government Architect Mr. Isaac and the local Assistant Engineer Mr. Balakrishnan, who have all taken enormous pains to get this building ready for this function in good time and give it a finish of high quality and standard. We were extremely desirous that this should be done before the 20th December, because hereafter we will get too busy with the elections and other work. Therefore we requested them to hurry up. While hurrying up, they have

not lost the quality or the standard. I thank every one of the P. W. D., and their contractors M/s South India Corporation, Madras who have finished the work so ably.

Then, various institutions and firms in this city, Madras and elsewhere have helped in different ways for the successful conduct of these functions. Some of the firms have participated in our exhibitions. Some of the local educational institutions such as the Home Science College and the Forest College also actively participated in the conduct of the exhibitions. There are many who have helped us in many ways, and their list is a rather long one and therefore I would like to avoid mentioning every one. But I would like to thank every one of them who have participated in the exhibition or in any another manner contributed to the success of these functions.

Then I would like to thank the Madras Agricultural Students' Union, which very kindly and very appropriately thought of recognising the good work and excellent services that our Minister has been able to render to this department, by presenting his portrait. They took the initiative, they got the portrait prepared and they gave the idea that it should be got unveiled, and we are greatly indebted to our Government also for accepting the portrait and for naming the Post-Graduate Hall as Bhaktavatsalam Hall.

Before concluding, I would be failing in my duty if I do not appreciate and commend the exceedingly good work done by one and all of the department, particularly here at Coimbatore in the A. C. & R. I., headed by the Dean and assisted by the Associate Dean, the Specialists, the Assistants, the research staff, teaching staff and students, who have toiled for days to make this function a great success. They had to plan and carry out every minor detail to see that nothing goes wrong and plenty of organisation and a lot of personal effort, supervision and direction had to be done. They did it days and nights together without any rest. I have been here a day in advance, and I have seen what an amount of trouble they had to take to see that every thing goes all right. Particularly when a thousand farmers from long distances were expected, they should not feel disappointed, or go back, not being properly attended to. To achieve all this, plenty of effort, initiative and supervision have been necessary. And I would like to commend every one of these, including the Dean, for all the excellent work done and the job neatly executed.

I once again thank every one of you gathered here — distinguished visitors, farmers and men from other walks of life, who have honoured us by their presence. I would like to conclude by saying that the department, with all the good wishes that have been showered on it, and with all the praise of the good work done and the appreciation shown and recorded here, will not fail in discharging the duties towards the welfare of the State and its farmers.

GOLDEN JUBILEE COMMEMORATION NUMBER

TRENDS IN AGRICULTURAL RESEARCH

To mark the Golden Jubilee of the Madras Agricultural Journal which has a proud record of uninterrupted publication since its inception fifty years ago, a special publication containing contributions embodying the latest trends of agricultural progress by eminent scientists from India and abroad has been prepared. This special publication called "Trends in Agricultural Research" was released by Shri Shankar, I. C. S., Vice-President of the Indian Council of Agricultural Research.

It would be seen that the articles cover practically the entire field of agricultural sciences and include also recent trends in agricultural education and extension. The topics were first carefully chosen by a special Editorial Board with Dr. S. Krishnamurthi, Dean and Ex-officio Additional Director of Agriculture as the Editor-in-Chief and contributions were invited from eminent scientists who had specialised in the particular subject in both India and abroad.

The volume consists of as many as 57 papers in three main sections: Research, Education and Extension. Under research, the papers are grouped into suitable sections such as Agricultural Botany, Agronomy, Soil Science, Horticulture, Entomology and Plant Pathology. In Agricultural Botany, there are 16 papers headed by an article on the survey of recent advances in plant breeding procedures by Dr. B. P. Pal, Director, Indian Agricultural Research Institute, New Delhi, followed by a paper on rice breeding and genetics by Dr. K. Ramiah, former Rice-Consultant of the F. A. O. The breeding of sorghum, a food grain which is next in importance only to rice in India, is dealt with by Dr. Rachie of the Rockefeller Foundation, New Delhi and is followed by an article on sugarcane by Dr. N. R. Bhat, Director of the Sugarcane Breeding Institute, Coimbatore. The remaining papers in this section cover other important aspects like Cytogenetics and Plant Physiology and the progress and achievements in specific crops like paddy, millets, cotton, pulses and coconuts.

The section on Agronomy includes papers on the water requirements of crops, agronomic problems in irrigation projects, review of fertiliser trials on rice, the role of green manures, weed control and weather research as an aid to agriculture.

In the field of Soil Science, there is an excellent paper by Roger H. Bray, an authority in this field from the U. S. A., on 'Modern trends in the assessment of soil fertility' and three other papers dealing with recent trends in soil studies in Madras and India and on the availability of plant nutrients in the soil.



SHRI V. SHANKAR, I. C. S.
Vice-President, Indian Council of Agricultural Research, New Delhi



The portrait of Sri M. Bhaktavatsalam unveiled by Sri C. Subramaniam



SRI V. KARTHIKEYAN
Director of Agriculture, Madras



SRI A. VENKATESAN
Secretary, Food and Agriculture, Government of Madras



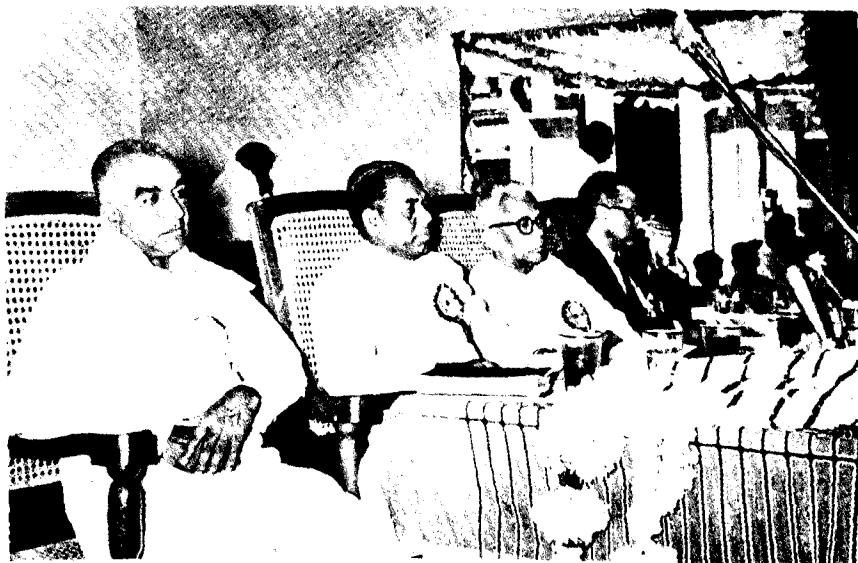
DR. S. KRISHNAMURTHI
Dean and Additional Director of Agriculture



Sri V. Karthikeyan proposing vote of thanks



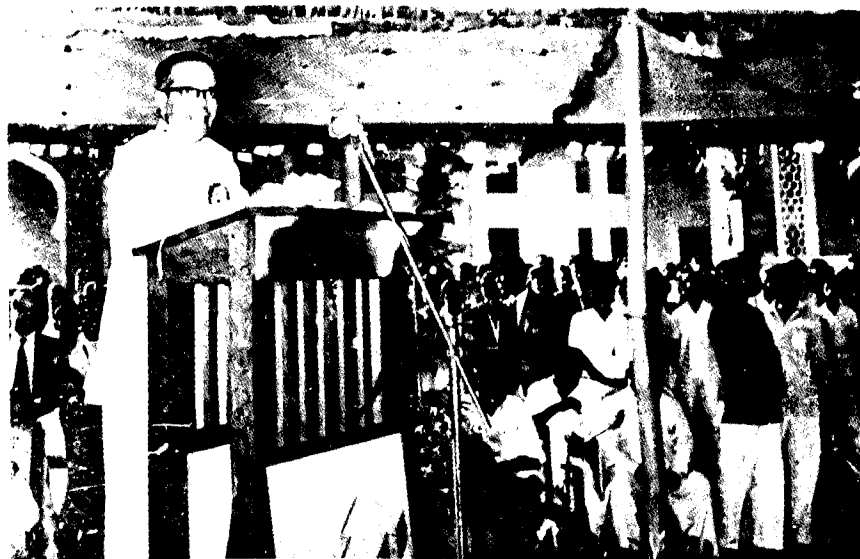
Dr. R. W. Cummings of the Rockefeller Foundation making his inaugural speech on the Second Annual Session of the Academy of Agricultural Sciences



The State Farmers' Day Celebrations



The Departmental Officers' Conference in Session



Dean and Additional Director of Agriculture delivering the Welcome Speech



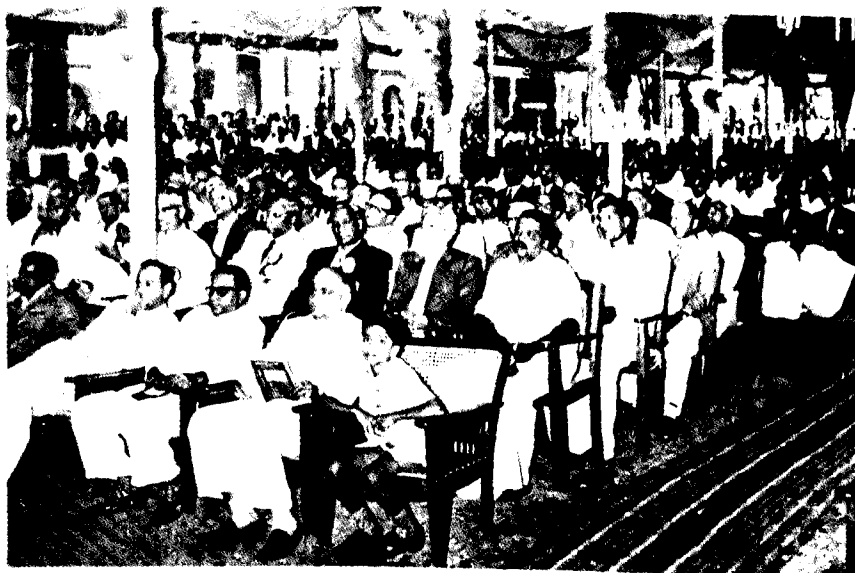
Sri M. Bhaktavatsalam delivering his presidential address



Sri C. Subramaniam pressing the button while declaring open the new Library Block



Shri V. Shankar inaugurating the College Day and Conference



A section of the audience on the Celebration of the Golden Jubilee of the Madras Agricultural Journal and the College Day and Conference



The College Champion Sri Syed Mohamed at the Centre



The College Day Sports



Mrs. Govindarajulu distributing the prizes

SCENES FROM COLLEGE DAY DRAMAS



An agricultural extension programme being discussed by the Extension Officer with the farmers



'Paddy Partners' staged by the lady staff and students

The Horticulture Section includes two papers by two world authorities on citrus viz., Prof. Hodgson of the U. S. A., and Prof. Tanaka of Japan, followed by other eminent authorities like Prof. J. C. Miller on vegetable breeding, Dr. Stoutemyer of University of California on ornamental horticulture and Dr. M. S. Randhawa on 'Beautiful Trees' in India. The other papers deal with the introduction and development of tropical and sub-tropical fruits in Madras, pollination techniques in fruit and vegetable crops and the effect of plant regulators on Indian plants with special reference to horticultural crops.

In the Section on Entomology, Dr. Painter of Kansas, U. S. A., a well-known expert in the field, reviews the latest trends in insect resistance in plants, while the section on Plant Pathology contains a paper on recent developments in fungicides by Dr. Horsfall, tissue culture as an aid to the study of plant diseases by Dr. A. C. Hildebrandt, the control of bacterial pathogens by Dr. Goodman, and on the role of meteorology in relation to plant diseases and pests by Dr. Austin Bourke from Ireland, all these being contributions from the top scientists in their respective fields.

In the field of agricultural education, Dr. R. W. Cummings of the Rockefeller Foundation, New Delhi, discusses the concept of agricultural universities in relation to India's needs and this is followed by a paper by Dr. S. Krishnamurthi on the landmarks in agricultural education. Similarly, the progress which has been made in agricultural extension during the past fifty years and recent trends have been reviewed in two papers by technical men in the field.

It would be seen from the above outline that a very wide range of topics relevant to agricultural progress has been covered in the papers now embodied in the commemoration publication "Trends in Agricultural Research" and its contents are given below.

I. AGRICULTURAL RESEARCH

AGRICULTURAL BOTANY

1. Recent advances in plant breeding procedures B. P. Pal, New Delhi.
2. Rice breeding and genetics K. Ramiah, Bangalore.
3. Recent trends in sorghum breeding K. O. Rachie, New Delhi.
4. Sugarcane breeding in India in retrospect and prospect N. R. Bhat, Coimbatore.
5. Groundnut breeding—a review C. R. Seshadri, Madras.
6. Some concepts on heterosis: a critique V. Santhanam, Coimbatore.

7. Fifty years of research in rice breeding and genetics in Madras
A. Abdul Samad,
A. Shanmugasundaram
and K. Rajagopalan,
Coimbatore.
8. Advances in millet breeding and genetics
B. W. X. Ponnaiya,
V. S. Raman and
A. Subramanian,
Coimbatore.
9. Contributions to superior germplasm in cotton
C. K. Ramachandran,
Coimbatore.
10. Research on coconuts in Madras State
S. G. Aiyadurai,
Coimbatore.
11. Recent researches in pulses breeding in Madras State
V. Srinivasan, Coimbatore.
12. Recent advances in the study and experimental manipulation of genes and chromosomes
M. S. Swaminathan,
New Delhi.
13. Progress of cytogenetical research in Madras State
V. S. Raman, Coimbatore.
14. Role of physiology in crop improvement
J. J. Chinoy, Ahmedabad.
15. Review of research in plant physiology in Madras
S. Gopalakrishnan,
Coimbatore.
16. Plant introduction and survey in Madras State
D. Daniel Sundararaj.

AGRONOMY

1. Agronomy problems under irrigation projects
M. R. Balakrishnan,
Burma.
2. Water requirements of crops with special reference to Madras State
T. Natarajan,
Madras.
3. Results of manurial trials in Madras State on paddy
A. Mariakulandai,
S. Rajarathnam and
Y. B. Morachan,
Coimbatore.
4. The role of green manuring in soil management
V. T. Subbiah Mudaliar
and A. H. Subramania
Sarma, Coimbatore.
5. Weed control in field crops
L. N. Skold, Coimbatore.
6. Weather research as an aid to agriculture
C. Balasubramanian,
Coimbatore.
7. Trends in Agricultural engineering research
T. S. Palanivelu,
Coimbatore.
8. Techniques and problems in soil conservation
N. Sankaranarayana
Reddy.

SOIL SCIENCE

1. Modern trends in soil fertility assessment
Roger H. Bray,
U. S. A.
2. Half a century of soil studies in Madras State
D. John Durairaj and
F. L. Daniel, Coimbatore.
3. Recent trends in soil morphological studies in India
S. P. Raychaudhury and
R. S. Murthy,
New Delhi.
4. Physical chemistry of the availability of plant nutrients in soil
B. Rama Moorthy,
New Delhi.

HORTICULTURE

1. Beautiful trees of India
M. S. Randhawa,
New Delhi.
2. Taxonomy and nomenclature in Citrus fruits
R. W. Hodgson, (U. S. A.),
New Delhi.
3. Achievements in the improvement of Citrus
Tyozaburo Tanaka,
Japan.
4. Mango in India - problems and achievements
L. B. Singh, Saharanpur.
5. Genetics and cytogenetics of fruit trees
S. K. Mukherjee,
New Delhi.
6. Recent trends in the techniques of pollination in fruits and vegetables
S. Krishnamurthi and
V. N. Madhava Rao,
Coimbatore.
7. A review of work on plant regulators in India with special reference to horticultural plants
S. Krishnamurthi,
Coimbatore.
8. Problems in vegetable breeding in retrospect and a look ahead
Julian C. Miller, U. S. A.
9. Floriculture and ornamental horticulture in the twentieth century
V. T. Stoutemyer,
U. S. A.
10. Fruits of the world in Madras
S. Krishnamurthi and
J. Samuel Sundararaj,
Coimbatore.
11. Trends in grape research and development in Madras
S. Krishnamurthi and
V. N. Madhava Rao
Coimbatore.
12. Application of radio-isotopes in problems of Horticulture
S. H. Wittwer, U. S. A.

ENTOMOLOGY

1. Insect resistance in plants Reginald H. Painter,
U. S. A.
2. Modern trends in plant protection K. B. Lal, New Delhi.
3. Principles of bio-assay of insecticides S. Pradhan, New Delhi.
4. Bee keeping in South India P. S. Narayanaswamy and
V. Mahadevan, Coimbatore.
5. Modern trends in insect classification Md. Basheer and
S. Jayaraj.
6. A review of nematological research in India A. R. Seshadri,
Coimbatore.

PLANT PATHOLOGY

1. Recent developments in fungicides James G. Horsfall, U.S. A.
2. Tissue culture as an aid in the study of plant diseases A. C. Hildebrandt,
U. S. A.
3. Recent advances in the control of bacterial phytopathogens Robert N. Goodman,
U. S. A.
4. Taxonomy of fungi in relation to plant pathology C. V. Subramanian,
Jodhpur.
5. Rhizosphere microflora in relation to soil borne diseases of plants K. Bhuvaneshwari,
T. S. Sadasivan and
C. B. Sulochana, Madras.
6. Some aspects of fungal root rots in crop plants C. V. Govindaswamy,
Coimbatore.
7. Fifty years of plant pathological research in Madras M. Kandaswamy,
Coimbatore.
8. Recent developments in the study of rice diseases S. Y. Padmanabhan,
Cuttack.
9. Virus resistance in crop plants K. Ramakrishnan and
B. Jayarajan, Coimbatore.
10. Meteorological studies in relation to plant diseases and pests P. M. Austin Bourke,
Ireland.

II. AGRICULTURAL EDUCATION

1. The concept of Agricultural Universities Ralph W. Cummings,
New Delhi.
2. Landmarks in agricultural education in India S. Krishnamurthi,
Coimbatore.

III. AGRICULTURAL EXTENSION

1. Extension through the years T. S. Francis, Thanjavur.
2. Recent trends in agricultural extension methods A. H. Subramania Sarma,
Coimbatore.

STATE FARMERS' DAY

State Farmers' Day

The most outstanding function of the Conference week began on the 21st morning with the convening of the State Farmers' Day under the distinguished presidentship of Sri M. Bhaktavatsalam, Minister for Home and Agriculture, Government of Madras.

The State Farmers' Day was a great success and an event of great significance this year, because unlike in previous years, over two thousand farmers from all over the State attended the function. The presence of such a large number of farmers from as far as Tirunelveli, Kanyakumari, Ramanathapuram, Madurai and far away Chingleput was something unprecedented. Their attendance reflected the enthusiasm and interest evinced by farmers of our State in scientific agriculture. It was most gratifying to all who attended the Farmers' Day, to see so many farmers with such progressive outlook coming over at considerable personal inconvenience to learn new ideas and apply them to their farming methods. Indeed, the conclusion was that Agriculture in Madras was safe in their hands and whatever new developments or new ideas the research worker had to show them to help increase agricultural production, there were thousands willing to adopt them, thus making agriculture a prosperous venture in South India. These apart, their presence for the Farmers' Day was evidence of their faith in agricultural research and its extension, their faith in the man in the laboratory and the extension man, that there is something worthwhile to learn from them and adopt them in their farms. This indeed is a very welcome development, a consumation devoutly wished for a long time but achieved only now.

Beginning from the previous evening itself streams of buses started arriving and by midnight nearly thirty buses had arrived and unloaded over thousand farmers. By day break another flow of buses started coming and added to this, every train that arrived brought in its quota of farmers. By nine in the morning, the whole campus was full with farmers, on their pilgrimage to the temple of agricultural science. The function itself began sharp at ten a. m. in the well decorated and spacious pandal. The pandal itself was overflowing with farmers and many had to stand forming a cordon around the pandal.

Sri M. Bhaktavatsalam, the Minister for Home and Agriculture presided over the function. After prayers, Sri V. Karthikeyan, I. A. S., Director of Agriculture, welcomed the Minister and the large assemblage of farmers. In his speech, Sri Karthikeyan traced the history of the celebration of the Farmers' Days in Government Research Stations and its significance. The Farmers' Day of the Central Farm used to be celebrated annually, he said, along with the College Day and Conference and mentioned the two important departures made during the year, firstly in

changing the time of the celebrations to December as at that time there will be crops standing in the fields which the farmers could see and be benefitted. Another useful departure was to expand the scope by making the Farmers' Day into a State Farmers' Day so that farmers from all over the State could come and participate in the function.

It was gratifying to note, he said, that farmers have responded to their invitation and come in large numbers to attend the function. He told them to make the best of their visit to the Institute by visiting the fields and the laboratories and particularly the special exhibition that have been arranged for their benefit. The Director of Agriculture also invited the farmers to see the National Agricultural Fair at Madras wherein the State was putting up an excellent exhibition and also the various other exhibitions organized by other States and some countries like the U. S. A. etc. in the National Agriculture Fair at Madras.

Sri V. Karthikeyan also expressed his gratefulness to Sri M. Bhaktavatsalam, the Minister for Food and Agriculture for kindly presiding over this very important State Farmers' Day.

The chief speaker of the day was Sri R. Srinivasa Iyer, Secretary, Farmers' Forum. Sri Srinivasa Iyer, a prominent farmer himself is associated with the Farmers' Forum of the State as its Secretary. The strength and popularity of the Farmers' Forum in the Madras State is largely due to his sincere and hard work born out of a desire to bring about a strong organisation of the farmers of the State. He is also associated with the Co-operative Sugar Factory at Madurantakam. A staunch supporter of the cause of the farmer, Sri Srinivasa Iyer in his speech emphasised on the need for co-operative organisations in agriculture. He added that such co-operatives open the minds and intellects of the farmers by joint action and mutual consultation thus strengthening the bonds among the rural population.

As one connected with a big co-operative sugar venture, he mentioned the problems facing the sugarcane grower today and its impact in the cane growing areas and the action taken to remedy them. In the course of his speech Sri Srinivasa Iyer also emphasised on the need to introduce crop insurance schemes in the State.

Sri M. Bhaktavatsalam, Minister for Home and Agriculture, who presided over the function, gave away the State awards in the crop yield competition for the year 1959-'60 to Sri Shanmugasundaram of Valivalam (Tanjavoor district) who produced 8430 lb. of paddy per acre, to Sri R. Rajagopala Naidu of Jallipatti (Coimbatore Dt.) for producing 6610 lb. of cholan per acre, to Sri Kavetti Naidu of Sowripalayam (Coimbatore Dt.) who obtained 4435 lb. of Cumbu and to Sri P. Subramania Gounder of Pongaliyur for producing 4070 lb. of groundnut.

After the distribution of prizes, the prize winners spoke explaining the methods of cultivation adopted by them for achieving the high yields.

Sri R. Shanmugasundaram, prize winner of paddy, detailed the methods of cultivation adopted by him for obtaining the record yield. He said that the strain grown was Co 25, a high fertility strain. In addition to green manuring with Pillipesara, the field was also manured with 10 cart loads of farm yard manure. After ploughing, a supplementary dose of 4000 lb. of gliricidia leaves were applied, followed by an application of 540 lb. of superphosphate. A second dose of 360 lb. of super phosphate was applied after the green leaves had well rotted followed by one more ploughing and the field was then levelled. Line planting was adopted with a spacing of 10" x 8" and 3 to 4 seedlings in each hole. Periodical intercultural operations were given as also sprayings. Ammonium sulphate at 250 pounds per acre was applied as a top dressing in two stages. All these resulted in the high yields, he said. Sri Kavetti Naidu, winner in cumbu next emphasised on the importance of quality and fertility of the land, intensive manuring, good irrigation water and timely sowing for high production as was obtained by him successively during the last two years. He then described how the residual effect to the manures applied to the previous crop of tobacco and cotton also helped to obtain high yields.

Sri Subramania Gounder, prize winner of groundnut, described his experiences. He said that sheep penning at 100 sheep daily for 1½ months and 25 cartloads of compost were responsible for his high yields.

Sri R. Rajagopalaswamy Naidu a repeated winner in cholan in crop competitions, said that he depended mainly on the good advice and useful instructions given by the agricultural department, which enable him to get maximum yield in cholan and win prizes successively since 1957-'58. The departmental strain, large quantities of manures and fertilisers and adequate plant protection were responsible for the high yields, he said.

Sri Subbanna Gounder of Sulur, while offering general remarks, appealed for a sugar factory in Tiruppur area. He also appealed for the distribution of pesticides and fungicides at concessional rates throughout the year and requested the Government to take action on the prevention of adulteration in fertilisers and pesticides. He complimented the department for the longstaple cottons produced and wanted better and better cottons as good as Egyptians to be produced here in Coimbatore.

Sri M. Bhaktavatsalam, Minister for Home and Agriculture then addressed the gathering. He said that the farmers of this State were second to none in taking to improvements on all aspects of crop production and it was their sustained efforts that helped the State to secure a

substantial increase in agricultural production. As a further inducement to step up food production, the Minister expressed the view that from next year onwards prizes could be awarded to prize winning villages, taluks and districts instead of giving prizes to individual farmers. He said that the programme of increasing agricultural production under the third plan demanded greater efforts on the part of the agriculturists in the villages and also by the departmental officers. He appealed to farmers to continue to strive for better production than in the past and reach the target fixed in the third plan.

The Minister referred to the Agricultural Ministers' Conference held at Bangalore recently and said the Ministers had discussed the importance of taking up minor irrigation schemes in their respective states and urged the centre to allot more funds for these schemes. Referring to the problem of sugarcane growers, the Ministers said the Government were considering giving all possible assistance for encouraging Khandasari sugar factories in the State in a few places as an experimental measure.

Earlier the Minister said that though the Lower Bhavani Project was commissioned for increasing the cotton cultivation in that area agriculturists were cultivating more paddy than cotton. He hoped that the agricultural officers would pay special attention to this problem and see that quality cotton was also produced. Commenting on the function, the Minister suggested that the State Farmers' Day should be celebrated every year and a whole day be set apart for the purpose. He also appealed to the traders not to indulge in black marketing in the matter of selling fertilisers to the agriculturists. In the end, he assured that all possible steps would be taken to see that the results of the agricultural research reach the farmers easily and quickly.

The pleasant and the most important function, the First State Farmers' Day, ended after a vote of thanks proposed by the Agromonist and Associate Professor of Agronomy.

**ACADEMY OF AGRICULTURAL SCIENCES,
THE MADRAS AGRICULTURAL STUDENTS' UNION
AND OTHER FUNCTIONS**

**Second Annual Session of the Academy of Agricultural Sciences,
Coimbatore.**

The Agricultural College and Research Institute has been organising a Conference of Agricultural Scientific Workers annually at Coimbatore. This is an occasion when the research workers in the State gather together at a special scientific session wherein papers on current research problems in the different branches of Agriculture are presented and discussed. The papers presented in these sessions were published as the Proceedings of the Annual Scientific Workers' Conference by the Government of Madras. These Scientific Workers' Conferences conducted over the past decade proved immensely useful and it was thought fit to establish an Academy of Agricultural Sciences at the Agricultural College and Research Institute, Coimbatore. This Academy of Agricultural Sciences was inaugurated by the Minister for Agriculture, Madras last year. Several papers were presented at this first Annual Sessions of the Academy and its subsequent monthly sessions and these have been arranged for publication as the Proceedings of the Academy of Agricultural Sciences, Coimbatore.

The Second session of the Academy of Agricultural Sciences was held on the 22nd December 1961. As this Second Session of the Academy synchronised with the Golden Jubilee Celebrations of the Madras Agricultural Journal and the Madras Agricultural Students' Union, it was felt that the Session held on this occasion should be memorable and benefit all workers concerned with scientific progress of agriculture in the country. Accordingly invitations were extended to scientific workers from different States in the country to contribute papers and participate in the proceedings.

Many research workers from all over the country responded to our invitations and in all 42 papers were received and presented. The abstracts of the papers are presented in this issue. Many scientific workers from all over India were also present for the Academy sessions. Dr. R. W. Cummings of the Rockefeller Foundation, New Delhi presided.

Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture and Chairman of the Academy of Agricultural Sciences, Coimbatore in welcoming the president said :

Dr. Cummings, Ladies and Gentlemen, as the Chairman of the Academy of Agricultural Sciences, I welcome Dr. Cummings to our midst today. It is a great privilege to us and to the Academy to have Dr. Cummings who has found time to inaugurate and to preside over this Second Annual Session of the Academy of Agricultural Sciences.

For the past 10 years we have been organising at the time of the College Day, the Scientific Workers' Conference. Every time we had

only 9 or 10 selected papers presented at the meeting because of limited time. This year, we wanted to branch off into working groups because we found in previous years that subjects which have been developed very well in the papers were not receiving full attention for presentation and discussion, at any rate, from the specialists' group. To give good attention to all the original scientific papers, we arranged for sectional groups this morning.

A good deal of ground work has already been done in the fore-noon and there has been a thorough discussion of all the topics that came before the several working groups. When I went round to look after the different groups, I found that it was well attended and there was a good deal of interest which was shown. It indexed the manner in which in future we have to handle the Annual Session of the Academy.

I do not want to take lot of time; I have already had my talk with Dr. Cummings and explained the objectives of this Academy. I would thank you Dr. Cummings once again and request you to deliver the presidential address, before the presentation of the reports by the Convenors of the working parties.

Thank you.

Inaugural Speech by Dr. R. W. Cummings

Mr. Chairman, distinguished visitors and fellow scientists, I count it a distinct honour and privilege to be with you today and to preside over this second session of the Madras Academy of Agricultural Sciences.

I understood that this academy expects to hold annual meetings in which the agricultural scientists of this State, as well as a number of your fellow workers from elsewhere, come together to exchange views and experiences and report on researches completed and in progress. Through participation in meetings of this type each of us inevitably gain new ideas and new inspiration and go back to our respective responsibilities with increased energy and determination to put our full talents and energies toward pushing back further the frontiers of knowledge and toward using the information so gained towards greater service to our fellow men.

I would like to offer my word of congratulations and good wishes to the Madras Agricultural Students' Union, holding its 44th College Day and to the Madras Agricultural Journal, with its very distinguished and worthy record and now celebrating its Golden Jubilee. It is gratifying to see the dedication of your Library Block, the beginning of a new Agricultural Training Building and I am pleased to note that you are taking this occasion to pay honour to your distinguished Minister of Agriculture, Sri Bhaktavatsalam, unveiling his portrait and providing a lasting tribute to his leadership and dedicated service to the State in naming the Post-Graduate Building in his honour. These various events, needless to say, all contribute to making this a truly inspiring occasion. I wish to take this opportunity to share with you some of my thoughts and convictions with respect to our tasks as agricultural scientists and to ask you to think with me for a while as to how each of us individually and we collectively can continue to improve our effectiveness and usefulness in this field.

In the first place, I feel that it is important that each of us consider himself as a member of a larger team and that, while doing as thorough and intensive job as we possibly can within the range of our responsibilities, we recognise that our own efforts are part of a much larger programme in the service of agriculture and our own efforts should reinforce and complement those of our other colleagues. We frequently find that the total impact of a number of practices, when used properly together, is much greater than the sum of the various individual ones used separately, since the response from any one may be limited by deficiencies in another. Likewise, our impact as a team working together can be much greater than the sum of our individual efforts. In some respects, we might even draw an analogy with the various organs of the human body. None of us would deny the usefulness of a finger, an eye, an ear, a heart, an arm or a leg, but at the same time we can readily appreciate how very

much more useful each of these is when it is a part of a functioning body than when it is cut off and separated from that body. Team work and co-operation, along with a spirit of mutual trust and respect, in my judgment, is worthy of being cultivated at all opportunities. Let us avoid trying to fragment our work and compartmentalize it too narrowly but constantly think of it as an essential part of the larger programme.

Further to this point, I believe that it should go without saying that not only is the above principle applicable when speaking of the different scientific disciplines such as Agronomy, Chemistry, Plant Breeding, Plant Pathology, Entomology, Horticulture, Economics, Sociology, etc. but it should apply equally well to the different types of functions from research into teaching curricula, extension programmes and into the planning and execution of service, supply and action programmes serving agriculture.

If we think in the above terms, I believe we will tend to think less and less in terms of whether a given function or project is a State activity or a Central activity. Many problems have aspects which transcend State boundaries and have regional, national or even international implications. Likewise, they are likely to involve principles which are common to many or all states where the particular crop or animal is grown. This would seem to offer many opportunities for developing partnership between State and Centre, in which the resources and talents available to both are pooled in a common effort, so planned jointly that the local needs as well as the regional and national aspects are considered appropriately without under duplication of effort and resources.

It is my observation that the distinction between basic research and applied research tends to fade as we clearly identify our objectives and think through the type of approach and the principles which must be applied in order to find the solution to the problem at hand and understand not just what happens but also why and therefore be in a position to predict what would happen if the conditions are altered.

Imagination, along with the courage to express new ideas, and the ability to develop and test new ideas and new approaches in a ruthlessly objective scientific manner must be encouraged. Think for a moment, if you will, of one or more significant advances, which have been made in science and in scientific agriculture, and see if you don't find behind this a person or a small group of persons with an idea which went beyond the general thinking and knowledge of his time and who had the courage and ability to develop it, prove it, and stake his reputation on its validity and worth. Also think of the people in your field whom you respect most highly and see if they aren't people with ideas and the courage to stand up for them. It may have been in pushing back the frontiers of knowledge or perhaps in developing techniques and methods

for promoting or administering a new programme. If a person expects to be a leader, he must have ideas, courage, energy, convictions, and must be willing to get above standard routines even to the point of taking some personal or professional risks for what he believes in.

A scientist must earnestly strive to understand the laws of nature, how his crops or animals respond and why and to what limits and what prescribes these limits. He cannot afford to be inhibited in his thinking or planning of his research work by what he thinks may be immediately acceptable or in harmony with farmer practices. A person studying fertilizer responses of crops, for example, will undoubtedly extend his levels of enquiry far beyond the range of current practice and even beyond the range which would seem to be profitable under present price levels. If he fully understands what his crop needs, or just how it responds over the entire range, he will have a fundamental basis for applying economic factors to determine the practices which will be profitable under any given set of circumstances.

In planning agricultural research, the individual scientist is quite likely to feel that he is under pressure for activity and for getting some tangible field or laboratory activity under way quickly. This undoubtedly has some merit for a conscientious person, provided one does not mistake mere physical activity for productive research. The steps in planning a research project would seem to be obvious but my observations lead me to believe that they cannot be re-stated nor re-emphasized too much. This involves at least the following steps and in about the same order.

- (1) A clear identification and statement of the problem to be investigated.
- (2) A tentative formulation and statement of the major objective.
- (3) Analysis of the reasons and justification for undertaking the work on this topic.
- (4) A thorough review of the published literature supplemented by any other sources of information available, to determine what is now known on this and directly related subjects and specifically the points at which information is lacking and further research needed.
- (5) A re-statement of the objectives in light of the above.
- (6) Formulation of tentative hypotheses as to the direction in which the solutions may be found or the basic principles which might seem to be applicable.
- (7) In light of the above, design of specific experiments which will give clear evidence as to the extent to which these hypotheses may apply.

- (8) Experimentation, with ruthless adherence to objectivity in making and recording observations.
- (9) Analysis of the data and its interpretation.
- (10) Publication of data and conclusions.

If the above steps are followed with complete scientific honesty and objectivity, the conclusions reached can be expected to have a high degree of reliability and to justify confidence.

Our Agricultural Departments, agricultural colleges, agricultural experimental stations and extension services have been established for the primary purpose of providing support to the improvement of the agriculture of our state and nation, all of us who accept employment in such organisations assume an obligation, a responsibility, and a challenge to that end. Agriculture can be improved by bringing modern scientific principles to bear on the various problems limiting productivity. I believe that the type of organizations we develop and the methods of administration used can have a very important influence on the extent to which agricultural scientific talent can be effective toward this end and I will say more about this later.

Agricultural research needs to have its objectives oriented toward the resolution of problems limiting productivity of land, crops and people. This calls for a careful analysis of the factors responsible for the present limits. The identification of one limiting condition and its remedy may only lead to another which comes in at a higher productivity level. Solution of a single one may require knowledge contributed by several different disciplines. Let me give only a few simple illustrations to indicate what I mean.

Let us suppose that we have already established the fact that, under a given set of circumstances, the paddy yield is being limited by insufficient nitrogen and that it can be improved by nitrogen fertilization. We may need to know what form of nitrogen fertilizer should be used, what rate of application and the most efficient method of application. To answer these questions, we need among other things, to know quite a bit about the rice plant, its stages of development, the pattern of its root development, the amount of nitrogen utilized at different stages and the effect on its physiological development of varying supplies at different growth stages. We need to know something about the soil and the particular environmental conditions therein and the general character of the microflora at its activities in and on the soil. For example, algae on the soil and in the water above the soil may, during photosynthesis, release oxygen and produce an environment above and at the soil surface conducive to oxidation of ammonia compounds. Anaerobic conditions may exist only a few millimeters below the soil surface at the same time,

leading to denitrification of nitrates which may move into such zones. Such circumstances might lead to large differences in response depending on whether a nitrate or an ammoniacal source were used and whether either of these were placed on the surface or within the soil. The time of application might be very significant in certain combinations of source and placement and much less important in others. Having established the most efficient combinations of source, placement and time of application, we might find next that the maximum level at which favourable responses are obtained is limited by strength of stalk or other plant characteristics and that genetic improvements in variety are necessary before maximum responses to nitrogen can be obtained. The development of new varieties would necessitate considerations of disease resistance, grain quality and many other factors. The above is not an isolated example. Close collaboration of scientists with different backgrounds is essential.

This brings me to the question of organization and administration. I am convinced that among other things the scientist needs flexibility of operation, sympathetic administrative support, an administrative system which is as simple as possible, good research tools, access to good library facilities, easy and ready access to and contact with other scientists, and recognition for his accomplishments. Such considerations have constantly been before the Agricultural University Committee which has been designated by the Government of India to advise on plans, draft legislation, and other matters relating to the development of Agricultural Universities in the States, with the hope of giving suitable orientation of the Agricultural Programmes to bring about the most effective integration of research, education and extension.

In reviewing and discussing proposals and plans of the various states, the committee has had the above considerations in view and many of its suggestions would seem to have more or less general or universal applicability such as :

- (1) The Agricultural University recognizes a direct responsibility and responsiveness to the cultivators. It goes beyond the role of the traditional University which is a seat of learning and scholarship and assumes an active responsibility for economic development and improvement of the status of the people.
- (2) In order to discharge this role it must have responsibility for applied and fundamental research in agriculture, broadly defined, throughout the state, such research going beyond the laboratory and into the fields and homes of the people.
- (3) It must have an active extension educational programme, fully integrated with teaching and research to assure a smooth flow of the results of research into practice and bringing the problems of the cultivators to the notice and active attention of the scientific research workers.

- (4) These responsibilities need to extend to all parts of the state.
- (5) The curricula must be flexible and modelled so as to be in keeping with the needs of the state and the students, and to incorporate modern advances promptly.

Such a university needs to develop a programme of instruction which is broadly based. For instructional purposes it should be residential as far as possible. In case more than one campus is necessary, all colleges must be constituent colleges, with a common governing board and an integrated administration. Affiliation, as is practiced in most Indian Universities at present, would have no place in the Agricultural University. The headquarters campus should ideally have at its center a good library, efficient administrative officers and services, hostels for students, a college of basic sciences and humanities to provide courses in these fields to all students, a college of agriculture, a college of veterinary and animal science, a college of home science and a college of agricultural engineering and technology. If for any reason it is not feasible to have all these units at once place, as many as possible should be on the same campus and any located on a second campus should be closely integrated in administration, curricula and programme. The headquarters campus must have in addition to the hostels, class rooms, laboratories, library and other academic building, a good and well managed farm of sufficient size to take care of the instructional needs of the students and to provide for a well rounded and balanced programme of research in agricultural science. The integration of research and extension activity should not be limited to the administrative levels but should extend into the various colleges, divisions, sections and projects. The individual instructors should in general, have some responsibilities for research. At the subject matter level, people engaged primarily in research should when in the office or laboratory, have their desks adjacent to the teachers and extension workers so as to multiply the personal contacts, encourage mutual understanding and facilitate the free flow of information, observations and considerations of problems between these respective activities.

The University must be autonomous and free from unduly complex administrative restrictions, subject of course to a full recognition of its responsibility to the public and with its activity and progress open to public view and its accounts subject to appropriate post audit.

The University must retain within itself the authority to modify syllabi and curricula to meet the requirements of a dynamic and rapidly developing agricultural science. It would be obvious, it seems, that this would require a system of internal examinations.

Off the campus, the research and extension (off campus education) programmes would require close coordination with the on-campus programme. Obviously, experiment stations would be required in various parts of the state representing the varying soil, climatic and type of farming areas.

These cannot be dispersed too widely, however, without putting the scientists in isolated environments out of frequent contact with their professional colleagues and without library and laboratory facilities. Such facilities which I think are absolutely essential for sustained scientific progress, cannot be duplicated at large number of places. This would suggest a pattern of a few—perhaps four to six—well selected regional stations within the state at which library and laboratory facilities are to be provided and at which scientists from various disciplines are located and the major research projects centered. These could be supplemented with other farms, coordinated with such main centers, at which range of applicability of principles worked out at the main centers could be tested. These supplementary farms, however, would not require actual residence of the senior scientists. I am pleased to note that Madras State has already started its development more or less along these general lines.

Extension services, to be effective must also be tied closely to an active research programme. The first requisite of an effective extension programme is to have an effective programme to extend. Extension methods are very important but have no meaning until this requisite has been met. Consequently, the central campus and the principal experiment stations would seem to provide the ideal headquarters locations for the extension subject matter specialists.

The key to rapid agricultural progress is held by you, the agricultural scientists. Let us hope that we will have the vision, the courage, the dedication, the determination and the energy to meet the challenge that is before us.

**Vote of thanks by Sri A. H. S. Sarma, Secretary, Academy of
Agricultural Sciences.**

Dr. Cummings, Dean Krishnamurthi, Ladies and Gentlemen,

We have now come to the end of this year's Academy Sessions. We had this year, 42 papers. Normally we would not have been able to go through more than a dozen papers at the most. Thanks to the suggestion made by the Chairman of the Academy, we have experimented with the sectional working parties. I have no doubt that you will all agree that this has been a great success particularly in view of the fact that this arrangement has enabled the presentation of all the papers not only to the satisfaction of the authors but also to the satisfaction and advantage of the other research workers, the visiting officers, delegates and others interested in the various subjects. It is also a matter for satisfaction to all of us that we have been able to supply the printed abstracts beforehand.

On behalf of the Academy it is now my privilege and a very pleasant duty to extend our grateful thanks to Dr. Cummings for having accepted our invitation to preside over to-day's deliberations. We are aware of his very busy schedule at New Delhi as the Field Director of the Rockefeller Foundation and we consider it our good fortune that he has been able to spare some time to guide the deliberations today. We have also taxed him in advance by sending the copies of papers to his New Delhi address and he has been kind enough to peruse them. We are indeed honoured by his distinguished presence. We are also very grateful to him for the very thought provoking address.

On behalf of the Academy I express our thanks to the Government of Madras for having accorded permission to hold the Academy Session during the College Day and Conference. I thank Sri A. Venkatesan, Secretary, Food and Agriculture on behalf of the Academy and I express our deep sense of gratitude to him for this. Our thanks are also due to Sri V. Karthikeyan, our Director of Agriculture for his abiding interest in the affairs of the Academy and for his encouragement extended to us in our endeavours.

My personal thanks and that of the Academy are due to Dr. S. Krishnamurthi, our Dean and Additional Director of Agriculture and the Chairman of the Academy of Agricultural Sciences. You are all aware he is the architect of this Academy and the Academy owes its origin to him. He was responsible for infusing fresh vigour into the old Scientific Workers' Conference and for having built up the Academy to the national character that it has assumed today.

I express my sincere thanks on behalf of the Academy to the various Institutions in the country who have responded to our invitation and contributed to make this session a great success by deputing delegates to take part in to-day's function and also for contributing papers. We, of the Academy are very thankful to the delegates who have responded to

our invitations and who have honoured us by their presence today. We extend to them our warm welcome and request them to stay on for a day or two more and go round the various sections in the institute.

On behalf of the Academy, I convey my sincere thanks to the judges of the Screening Committee who have taken great pains to scrutinise the research papers received from all over the country and for evaluating them. The Academy's special thanks are due in this context to Professor L. N. Skold, our TCM advisor on Agronomy who has shouldered a great deal of the burden on this and other matters concerned with the Academy. I also thank Prof. T. B. Narayanan, Retired Professor of Plant Breeding and Genetics, Sri C. S. Krishnaswami, Retired Mycologist, Dr. Santhanam, Head, Pircom centre and my colleague Dr. Ramakrishnan, who functioned as judges for the respective papers in their subjects of speciality.

I also thank the convenors of the working parties, Dr. Kulandai, Dr. Santhanam, Dr. John Durairaj, Dr. Ramakrishnan, Dr. Seshadri and Sri Madhava Rao for convening the morning sectional sessions and for presenting the respective reports. All of them had to work under high pressure to get through the sessions in the morning and also prepare their reports for the presentation in the after noon. On behalf of the Academy, I convey our thanks to them.

Before I close, I thank Sri Kandaswamy, our Treasurer, who had the arduous task of collecting the subscriptions and financing all the programmes. I also wish to record my personal thanks to Sri V. N. Madhava Rao, Reader in Horticulture who has been practically looking after the organisation of this academy and helping me in running this year's session, successfully. My thanks are also due to Sri J. Saktharam Rao in helping us with the printing of the abstracts and Sri S. Muthuswamy in organising the Tea-party which you are soon going to enjoy.

Permit me, Ladies and Gentlemen to strike a very personal note on this occasion. To me, personally it is a great occasion and perhaps a unique occasion too other wise because for the first time the Extension Specialist is functioning as the Secretary of the Academy of Agricultural Sciences, which is primarily a body of research workers. You thus find an ideal co-ordination among the three vital branches of Agriculture, namely Research, Education and Extension.

If I have been able to discharge my duties satisfactorily it is mainly to the unstinted co-operation that I have always received from all my colleagues and particularly from Dr. B. W. X. Ponnaiya, Associate Dean and the constant encouragement and guidance that I have received from our Dean and Chairman of the Academy and I take this opportunity to acknowledge them.

Dr. Cummings, Ladies and Gentlemen, finally I sincerely thank you all for having responded to our invitation and attended this session and for having made it a success.

Report of the Secretary of the Madras Agricultural Students' Union

Hon'ble Minister for Home and Agriculture,
 Hon'ble Minister for Education and Finance,
 Shri Shankar,
 Dr. Cummings,
 Distinguished Guests,
 Ladies and Gentlemen,

I consider it an honour to present a brief report on the Golden Jubilee of the Madras Agricultural Students' Union and Madras Agricultural Journal. The Madras Agricultural Journal which was started in a humble way as a Year Book in 1911 became a quarterly in 1912 and developed into a monthly from 1915. From a mere 300 strong membership, today the Journal has a circulation of 1700 copies, and as many as 59 foreign institutions besides a multitude of Indian institutions and farmers. We gratefully acknowledge the annual subsidy of Rs. 1,800/- which the Government of Madras have been pleased to sanction for the past ten years to augment our finances to meet our responsibilities. We are also grateful to the Secretaries of the various Market Committees and State Marketing Officer, Madras for the gesture in enhancing their rates of subsidy. To the sustained interest evinced by our patrons the Madras Agricultural Journal will ever remain indebted. I have great pleasure in announcing on this happy occasion that we have had the good fortune to have as many as 47 new patrons to our Journal this year.

On behalf of the Journal, I express my sincere gratitude to our Minister for Education and Finance for kindly presiding over the function and for unveiling the portrait of Sri M. Bhaktavatsalam, our beloved Minister for Home and Agriculture. We cannot adequately thank our Minister for Home and Agriculture who has been responsible for the phenomenal strides of this Institute during the past decade. We are grateful to him. We are indeed fortunate to have in our midst today, Shri V. Shankar, Vice-President of Indian Council of Agricultural Research to whom we owe our special thanks for having kindly accepted our invitation to release the Commemoration Number today.

I shall be failing in my duty if I do not place on record our gratitude to the Judges of the several competitions that we have been holding in connection with the 44th College Day and Conference.

I am grateful to our Director of Agriculture, Sri V. Karthikeyan who has been kind enough to guide us in our deliberations and for having accepted our invitation.

The Madras Agricultural Students' Union, as a body owes a deep debt of gratitude to its respected President, Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture, without whose dynamic leadership and

active interest in every item of work of the Union, nothing would have been possible. He has indeed been a great source of encouragement and help in the organisation of the series of functions of the Madras Agricultural Students' Union. Special mention must be made of the colossal task he had undertaken on himself as Editor-in-Chief of the Commemoration Number which involved careful planning, direction of the correspondence and scrutiny of as many as 60 scientific papers. It would indeed be hard to express in words our deep sense of gratitude to him.

My thanks are also due to our Associate Dean, Dr. B. W. X. Ponnaiya and Sri A. H. S. Sarma, Vice-President, Dr. S. Kanakaraj David, Sri T. Nataraj and Dr. D. Daniel Sundararaj (Editors) for their untiring efforts in all activities of the Madras Agricultural Students' Union during the year.

I wish to record our sincere thanks to Professor T. R. Narayanan, former Professor of Genetics and Plant Breeding and to Prof. L. N. Skold, T. C. M. Advisor on Agronomy for their unstinted co-operation and help in the editorial functions connected with this Volume. I am also grateful to the other members of the special Editorial Board for their ready help.

I wish to thank Sri A. Subramaniam, Secretary, Co-operative Printing Press, Coimbatore and his staff for their prompt service in bringing out the several publications in record time. Theirs was indeed more a labour of love.

I greatly appreciate the willing service rendered by my colleagues and the student volunteers.

To Mr. C. Balasubramaniam, the Co-ordinating Officer, my special thanks are due.

Lastly, Ladies and Gentlemen, I thank one and all of you for having been good enough to have responded to our invitation and graced the occasion.

M. Bagavandoss,
 Secretary.

**Fifty years of the Madras Agricultural Journal and the
Madras Agricultural Students' Union**

Fifty years ago, the then staff of the Agricultural College and Research Institute, Coimbatore as well as those working in the extension wing felt that the students of this college, members of the agricultural department, farmers and others interested in the development and improvement of agriculture should get together "to exchange their views and experience in the form of papers, debates and discussions". This resulted in the establishment of the Madras Agricultural Students' Union in 1911 with the following objectives.

- i. to encourage an *esprit de corps* among its members
- ii. to exchange opinions and experiences in agricultural matters and to make a record of them.

The Union has been serving the objectives laid down by the founders by the two most important activities of the Union, namely, the publishing of the Madras Agricultural Journal and the conducting of the annual College Day and Conferences. The College Day Conferences including the symposia are unique and the present one is the 44th College Day and Conference. In these conferences over 1000 papers have been presented and discussed so far and have been subsequently published in the Madras Agricultural Journal.

The Madras Agricultural Journal was also started as a quarterly in the same year and the first issue was an year book of 1911. From 1912 to 1944 it was a quarterly, when it blossomed into a monthly. This journal is one of the premier agricultural monthlies in India, having served the cause of agriculture all these 50 years. It has a monthly circulation of about 1750 copies, in and outside the country. The journal is on the exchange list of about 80 journals from all over the world and the articles are abstracted by important abstract services of the world such as the Agricultural Abstracts, Biological Abstracts, Horticultural Abstracts and others.

In helping to disseminate research findings to the extension staff and the farmers, this Journal has been a vital link. The annual conference numbers contain a fund of knowledge on all fields of agriculture and these will always remain as valuable guides and reference books for future generations.

With this record of recognition, service and achievement it is appropriate to commemorate the occasion by releasing a special number entitled "*Trends in Agricultural Research*" with Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture as the Editor-in-chief. You will find more details about this number elsewhere in this issue. It is needless to say that the Madras Agricultural Journal and the Madras Agricultural Students' Union certainly justify this Golden Jubilee celebrations.

Sitting (Left to Right):

Sri M. Bagavandoss (Secretary), Sri S. Muthuswami (Managing Committee), Dr. D. Daniel Sundararaj (Editor), Sri A. H. S. Sarma (Vice-President), Dr. S. Krishnamurthi (President Ex-officio), Dr. B. W. X. Ponnaiya (Ex-officio Vice-President), Dr. K. Ramakrishnan (Editorial Board), Dr. S. Kanakaraj David (Editorial Board), Dr. D. John Durairaj (Editorial Board).

Standing (Left to Right):

Sri A. Sathiaraj (Editor, Tatler), Sri M. Dinakaran (Treasurer), Sri S. Sankaran (Manager), Dr. V. Durairaj (Managing Committee), Sri M. V. Jayaraman (Managing Committee), Sri G. Meenakshisundaram (Secretary, Students' Club).

Report of the Managing Committee for the year 1960—'61

It is with much pleasure that the Managing Committee presents the following report for the year 1960—'61.

Membership: The strength of the Union as it stood on 15-12-1961 was 1700 as against 1242 during the previous year. It now consists of 750 student members, 320 resident members, 630 subscribers (including those on exchange basis) and patrons. Thus there has been about 30 per cent increase in membership over the previous year. It is also gratifying to note that the number of patrons have increased from 46 to 93 inclusive of Jubilee Patrons.

The Managing Committee appeals to all those present here to contribute their mite to strengthen the Union by enlisting more patrons and members.

Office - Bearers: Dr. S. Krishnamurthi, the Dean and Additional Director of Agriculture was the Ex-Officio President throughout the year. The post of Ex-Officio Vice-President was held by Dr. B. W. X. Ponnaiya. Sri A. H. S. Sarma was the elected Vice-President. Dr. S. Kanakaraj David was the Editor for sometime after which Dr. D. Daniel Sundararaj was co-opted as the Editor. Sri M. Bagavandoss was the Secretary for the period under report. Sri S. Sankaran was the Manager for the year. Sri K. R. Nagarajan was the elected Treasurer for a short-term after which Sri S. Premsekar and now Sri M. Dinakaran were co-opted as Treasurers.

Meetings: Sixteen meetings of the Managing Committee were held during the year under report.

The Madras Agricultural Journal: We are happy to announce that the Madras Agricultural Journal has successfully completed fifty years of useful service to the Agricultural Research, Education and Extension. The Market Committee Chronicle was regularly published as a supplement to the Journal under the valuable patronage of the various Market Committees and the State Marketing Officer. The Union wishes to place on record their ready co-operation in this venture. The Managing Committee places on record the valuable service rendered by the Editorial Board in maintaining the regularity and the standard of the Journal. Our thanks are also due to the Secretary and the staff of the Coimbatore Co-operative Printing Works Ltd., who undertook the printing and maintained a good standard in the format of the Journal.

We are also happy to announce that the format of the Journal has been revised with the addition of Agricultural Jottings to suit the needs of Agricultural Extension Workers and Farmers.



OFFICE-BEARERS OF THE MADRAS AGRICULTURAL STUDENTS' UNION FOR 1960-61

Finance: The finances of the Union were insufficient to meet the running of the Journal and the Union. With the increased cost of printing and the concessional rates of subscription of Rs. 3 to the students, the Union is facing an uphill task in maintaining the standard and the publication of the Journal. The Union wishes to express its gratitude to the Government of Madras for the annual subsidy of Rs. 1,800/-. We appeal to one and all members of the Madras Agricultural Students' Union to help the Union by the prompt payment of the subscription.

Prizes and Awards: The following awards were made during the year.

- | | | |
|---|-----|-------------------------|
| 1. Ramasastrulu Munagala Prize | ... | Sri M. Stephen Dorairaj |
| 2. V. C. Vellingiri Gold Medal | ... | „ A. Subramaniam |
| 3. Veeraragavalu Naidu Rolling Shield and Medal | ... | „ G. Thulasidas |
| 4. O. M. Lakshminarayana Reddy Rolling Shield and Medal | ... | „ V. N. Madhava Rao |
| 5. Ramakrishna Medal | ... | „ S. Kamalanathan |
| 6. Sambamurthy Medal | ... | „ S. Shanmugasundaram |
| 7. C. Subramaniam Medal | ... | „ C. R. Nagarajan |
| 8. M. Bhaktavatsalam Medal | ... | „ C. R. Nagarajan |
| 9. Krishnaswamy Naidu Medal | ... | „ R. Meganathan |

Our congratulations to the recipients of the Union's awards.

Patrons: We have great pleasure in welcoming the new patrons to our Union.

Retirements: The following members of the Union retired from service during the year under report.

1. Sri T. N. Balasubramaniam, Sugarcane Development Officer, Trichirapalli.
2. Sri V. Nataraja Iyer, A. M. O., Madras.
3. Sri N. K. Venkatasubramaniam, Superintendent, Agricultural Research Station, Palur.
4. Sri V. Krishnaswamy, Assistant Paddy Specialist, Thalainayar.
5. Sri C. Raman Moosad, Deputy Director of Agriculture, Madras.
6. Sri D. Shanmugasundaram, S. M. O., Madras.
7. Sri S. V. Ramachandran, A. M. O., Trichy.

Obituary: It is with deep regret that we record the demise of Sri P. H. Rama Reddy, former Director of Agriculture of the undivided Madras State and Sri V. Gomathinayagam Pillai, former Millets and Pulses Specialist who retired in 1954. We also deeply regret to record the demise of Sri S. Ramachandran, Retired Government Entomologist, Coimbatore and Sri K. Venkataswamy, Deputy Director Food.

Acknowledgments: The Managing Committee of the Madras Agricultural Students' Union owes its deep sense of gratitude to Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture who as the Ex-Officio President of the Union has been a guiding light in the various activities of the Union, especially to have conceived and executed the Golden Jubilee Commemoration Volume which was released during the 44th College Day and Conference. We are also thankful to Dr. B. W. X. Ponnaiaya, Ex-officio Vice-President who has taken an abiding interest in the multifarious undertakings of the Union.

We are specially thankful to Sri A. H. S. Sarma, the elected Vice-President of the Union who helped us to a very great extent in the conduct of the various activities of the Union as well as in initiating and enlisting numerous patrons and members for the Union. The Managing Committee gratefully acknowledges the help rendered by Dr. S. Kanakaraj David and Dr. D. Daniel Sundararaj as Editors and to Sri T. Nataraj who has been a source of unfailing help and co-operation. We also acknowledge the help rendered by all the Convenors and Members of the various Committees, office-bearers of the Union and the students who extended their willing and unstinted co-operation in the successful conduct of the 44th College Day and Conference.

M. Bagavandoss,
Secretary.

**The Madras Agricultural Students' Union
Proceedings of the Annual General Body Meeting, 1960-'61.**

The annual General Body meeting of the Madras Agricultural Students' Union was held at 4-30 P.M. on 24-12-1961 with Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture and the President of the Madras Agricultural Students' Union in the chair. The President welcomed the gathering. The minutes of the General Body meeting held on 21-8-1960 were read and adopted.

The Secretary presented the report of the Managing Committee for the year 1960-'61. The report was adopted. The audit report for 1960-61 and budget estimate for 1961-'62 were presented and these were adopted. The provision for an increased salary for the clerk was approved.

It was suggested and agreed that the General Body meeting may be held as far as possible on a morning and the old convention of "Breakfast party" be revived. This, it was felt would facilitate all the members to attend the meeting. The resolution of the Managing Committee were then taken up for consideration. On the advice of Messrs. T. Nataraj and C. S. Krishnaswamy the resolution to have only one class of members with an annual subscription of Rs. 8/- irrespective of status was withdrawn by the Vice-President.

The General Body resolved that out of the funds collected from the patrons, a sum of Rs. 7,000/- be kept as a revolving fund to meet expenditure for publishing useful books and other agricultural literature to be recouped within a reasonable time by their sale. It was also resolved that the Managing Committee might examine the existing strength of students and address the Government for additional grants on account of the increased student membership to whom the journal has to be issued at concessional rates. The resolution of the Managing Committee to raise the subscription of students to Rs. 5/- per annum was deferred pending reply from Government for increased grants.

The resolution of the Managing Committee that the financial year for Madras Agricultural Students' Union be changed over from 1st June to 31st May, to 1st July to 30th June to coincide with the half yearly closing of bank accounts to facilitate audit was approved. The letter from auditors for enhancing their audit fee was considered and it was resolved to enhance the audit fee from Rs. 50/- to Rs. 100/- from the year 1960-'61.

The following office-bearers were elected for the year 1961-'62:—

Vice-President: Sri Rajarathnam Chettiar
Editor: Dr. D. John Durairaj
Secretary: Sri M. Stephen Dorairaj
Manager: Sri B. Vasantharaj David
Treasurer: Sri S. S. Narayanan

Managing Committee

Members: Sri V. Srinivasan
Sri C. K. Ramachandran
Sri M. Bagavandoss

Editorial Board

Members: Dr. D. Daniel Sundararaj
Dr. A. R. Seshadri
Sri V. N. Madhava Rao
Resident Members: Sri C. S. Krishnaswamy
Sri T. R. Narayanan
Mofussil Vice-Presidents: Sri T. Nataraj
Sri C. R. Seshadri
Sri T. S. Francis
Mofussil Members: Sri T. Sivasubramaniam
Sri K. M. Narayanan
Sri C. Ekambaram
Sri K. R. Sundaresan
Sri R. Ramanathan

The General Body passed a resolution conveying its sincere thanks to the District Officers for their keen interest and co-operation in various ways to the success of the enrolling patrons, and to the patrons for their enthusiasm and valuable patronage. Sri C. S. Krishnaswamy moved a resolution congratulating the Managing Committee for the year 1960-'61 for successfully running the union and conducting the College Day and Golden Jubilee celebrations of the M. A. S. U.

The Vice-President proposed the vote of thanks and specially conveyed his personal thanks to all the District Officers who responded to his appeal to enroll patrons and for their generous co-operation to the success of the working of the Madras Agricultural Students' Union and the Madras Agricultural Journal. The Vice-President also thanked Dr. S. Krishnamurthi, the President of the Madras Agricultural Students' Union for his valuable guidance and unstinted co-operation in managing the affairs of the Madras Agricultural Students' Union and the conduct of Golden Jubilee celebrations of the Madras Agricultural Journal. He also mentioned that the Dean's active association with the Madras Agricultural Students' Union had been a source of inspiration. Finally he thanked the Managing Committee and the members for their co-operation.

Departmental Officers' Conference and Agricultural Engineers' Conference

The officers of the Agricultural Department meet annually during the week of the College Day and Conference to discuss problems connected with the efficient working of the department and to review progress and in what way the bottlenecks if any, in the implementation of the different programmes could be removed and the work streamlined. This conference was held on 23rd forenoon. Sri A. Venkatesan, Secretary to Government, Food and Agriculture Department, presided.

In welcoming the Secretary and the officers to the Conference Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture outlined the need for such annual conferences for streamlining the work of the Department and to bring together in a common platform the Research and Extension workers.

Sri V. Karthikeyan, the Director of Agriculture in initiating the discussions on the subjects in the agenda reviewed the work of the officers and on their duties and responsibilities. There were twentyone subjects in the agenda, the most important were concerned with preparation of village production plans, financing patterns in the implementation of agricultural schemes through Panchayat Unions, on the working of the Development scheme etc.

Sri A. Venkatesan, Secretary, Food and Agriculture emphasised on the need for hard work to attain the targets outlined in the plans and exhorted the officers to give of their best.

The Agricultural Engineers' Conference was held on the forenoon of the 24th. The Conference dealt with the administrative and technical aspects of the agricultural engineering programmes in the State. Sri N. Sankaranarayana Reddy, Joint Director of Agriculture (Engineering) explained the modern developments in tractor maintenance and the special features found in modern tractors such as the dry type 'air cleaners', monolubricants, lifetime lubrication rollers etc. Sri V. Karthikeyan, Director of Agriculture, Madras presided.

College Day Sports December, 23, 1961.

The Forty-fourth College Day Sports meet was held on 23—12—'61 in a fitting manner. There was an impressive marchpast by the athletes and Dr. Thulja Ram Rao, Director, Sugarcane Breeding Institute took the salute. As many as 19 events were conducted on that day in which students past and present, staff and competitors from local colleges and high schools participated.

Sri S. Syed Mohammed of the Final Year emerged as the champion of the college for 1961-'62 having secured 18 points. He was outstanding in the track events. He knocked off the Vengial Krishna Nayanar championship cup and the M. R. Balakrishnan cup for the best track athlete. Five new records were credited on that day and the credit of humbling three of the previous records went to Sri P. Perumal of I year (Intd.) class.

Sri G. R. Govindarajulu Managing Trustee and Correspondent, P. S. G. Trusts and Charities presided over the meet and Smt. Chandrakanthi Govindarajulu distributed the prizes to the winners of the various events. Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture (Ex-officio President of M. A. S. U.) welcomed the president and the guests. The Secretary, Food and Agriculture and the Director of Agriculture Madras were also present. Sri C. V. Govindasamy, Convenor, Sports Committee proposed a vote of thanks.

The results of the sports meet are given below :

Sl. No.	Event	First place	Second place	Remarks
1.	110 metres dash	S. Syed Mohamed	K. Thangavelu	
2.	200 metres dash	S. Syed Mohamed	K. Thangavelu	New record
3.	400 metres dash	S. Syed Mohamed	K. Thangavelu	
4.	800 metres race	S. Syed Mohamed	V. N. Krishnaswamy	
5.	1500 metres race	V. N. Krishnaswamy	Chandrasekaren	
6.	5000 metres race	V. N. Krishnaswamy	K. Devaraj	
7.	110 metres hurdles	P. Perumal	S. Syed Mohamed	New record
8.	200 metres „	P. Perumal	S. Syed Mohamed	„ „
9.	Shot Put	R. Deivasigamani	N. Kalimuthu	„ „
10.	Discus Throw	R. Deivasigamani	N. Kalimuthu	„ „
11.	Javelin Throw	Govindan	N. Kalimuthu	
12.	Hammer Throw	R. Deivasigamani	N. Kalimuthu	
13.	Long Jump	K. S. Ramaswamy	P. Perumal	
14.	High Jump	P. Perumal	G. Meenakshi-sundaram	New record

No.	Event	First place	Second place	Remarks
15.	Hop-step and Jump	K. S. Ramaswamy	P. Perumal	
16.	Pole Vault	N. Kalimuthu	Sheik Dawood	
17.	Cross Country race	V. N. Krishnaswamy	Vijayaratnam	
18.	Obstacle race	Ramaswamy	Vijayaratnam	
19.	800 metres Invitation race	Mr. Rodriguez Stanee High School	R. Jayachandran P. S. G. College of Technology	
20.	Staff Race 100 metres dash	E. V. Madhavaskandan, Asst. in Chemistry	R. Vellaichamy, Physics Deptt.	
21.	Staff Race-100 metres (Handicap)	Mr. M. D. Prabhu, Lecturer in Agronomy	Mr. Bennet Masila- mani, S. D. O., Madurai.	
22.	Lime & Spoon race	Mrs. Savithri Nagarajan, Assistant in Oilseeds	Mrs. Samathuvam Thangavelu, Asst. in Millets.	

College Day Entertainment

This year's entertainment with Sri S. Varadarajan as the Convenor consisted of seven items on the programme. The items began with an invocation dance by Kumari Lalithakumari. A Tamil play entitled "Vazhikatti" written by Sri S. S. Alamgeer bringing out some aspects of the Departmental activities was very well received. The other items of the programme were "The College Band" led by Sri Jayakumar Samuel, "The dumb man and his friend" by Sri Ahmed Mohideen and Sri Satyaraj, an English farce "Paddy Partners" written by Sri S. Varadarajan and Sri R. Ratnam and enacted by ladies (staff and students).

The following were the prize winners:—

English farce: I Prize Kumari N. Kamalam.
II „ Kumari Vinodhini Vasudevan.
Smt. Rani Perumal.
Tamil play I „ Sri Jeevanamohan.
II „ Sri Raghupathy.
Special prize: Sri Ahmed Mohideen and Sri Satyaraj.

Annual General Body Meeting of the Madras Agricultural Service Association.

The annual General Body meeting of the Madras Agricultural Service Association was held on 23-12-'61 with Sri V. Karthikeyan, Director of Agriculture and ex-officio President of the Association in the chair. Sri A. Venkatesan, Secretary, Food and Agriculture Department, Madras attended the meeting as chief guest. One hundred and ninety-six members attended the meeting.

Dr. S. Krishnamurthi, Dean and Additional Director of Agriculture, in his capacity as Vice-President of the Association, welcomed the president, chief guest and other members of the Association. In his welcome speech he laid stress on the urgency to protect the interests of the senior officers, who are to retire shortly from service.

The minutes of the previous annual general body meeting held on 21-8-1960 and the special general body meeting conducted on 3-6-1961 were presented by Sri C. Balasubramanian, Secretary of the Association and adopted. The annual report for the year 1960-'61 was also presented and adopted.

The following were elected unanimously as office-bearers for 1961-'62.

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|---|--------------------------------|
| 1. Sri V. Karthikeyan,
Director of Agriculture | } <i>Ex-officio President.</i> |
| 2. Dr. S. Krishnamurthi,
Dean and Additional
Director of Agriculture | |
| and
Sri C. R. Seshadri,
Joint Director of Agriculture
(Planning and Development),
Madras. | } <i>Vice-Presidents.</i> |
| 3. Sri C. Balasubramanian,
Agricultural Meteorologist | |
| 4. Sri S. G. Aiyadurai,
Oilseeds Specialist | } <i>Joint Secretary.</i> |
| 5. Sri S. Rajarathnam Chettiar,
Agronomist and Associate
Professor of Agronomy. | |
| | } <i>Treasurer.</i> |

6. Sri M. Mukundan,
Dy. Director of Agriculture,
Madurai.

Sri C. Ekambaram,
Dy. Director of Agriculture,
Madras.

and

Sri T. K. Sankarasubramaniam,
District Agricultural Officer,
Krishnagiri.

Executive Committee members.

The following were elected as auditors for 1961-'62.

1. Sri O. P. Selvaraj,
Junior Accounts Officer,
Central Office, Coimbatore.

2. Sri W. V. Thiagaram,
District Agricultural Officer,
Coimbatore.

Sri A. Venkatesan, Secretary, Food and Agriculture in his address assured the members that the Government would consider the resolutions favourably to the possible extent. Further he made it clear that the resolutions regarding provision of Government quarters and revision of daily allowance and mileage deal with general service conditions in all Departments and as such their consideration at Government level would take some time.

Sri V. Karthikeyan, Director of Agriculture and ex-officio President of the Association in his presidential address expressed the gratitude of the officers to the Government for the generous revision of the pay scales. On behalf of the Association he made fervent appeal to Government to consider the resolutions favourably. He laid stress on the need for our immediate consideration of the two resolutions referred to in the annual report regarding pensionary benefit to the officers who are to retire in two or three months and also regularisation of postings made under emergency provision. He expressed the opinion that it may perhaps be desirable to alter the rules of the Association so as to have as president some one other than the Director of Agriculture. He thanked the Association for the nice dinner arranged for the occasion.

With a vote of thanks proposed by the Secretary the meeting came to an end.

NEW PATRONS



SRI C. ADHIMOOLA REDDIAR



SRI M. N. ANANTHANARAYANAN



SRI V. ARJUNAN



SRI T. P. ATTIMUTHU





SRI D. NARAYANASWAMY



SRI R. PALANIAPPA MUDALIAR



SRI M. S. P. RAJES



SRI P. N. RAMAN



SRI T. V. V. PATHI



SRI G. PURUSHOTHAMA NAIDU



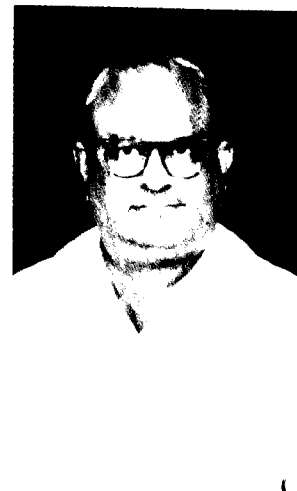
SRI R. RAMA REDDIAR



SRI S. RANGARAJAN



SRI V. V. RAJAGOPAL
SRI G. KANAKASABAI



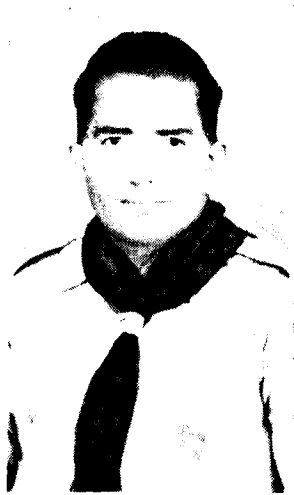
SRI N. RAJAGOPALASAMY NAIDU
SRI R. KAVETTI NAIDU



SRI N. SASTHA



SRI T. P. SIVANANDAM



SRI N. BORIAH



SRI V. DAMODARASWAMY NAIDU



SRI M. V. KRISHNA IYER



SRI T. S. KRISHNA RAO



SRI C. C. HAMZA



SRI HEBBAR S. N. DAS



SRI M. S. MADHUCHANDRAN



SRI M. K. MATHI GOWDER



SRI G. KANAKASABAI



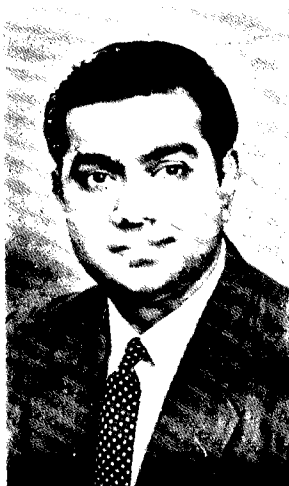
SRI R. KAVETTI NAIDU



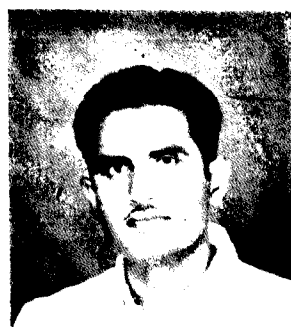
SRI K. S. MUTHU IYER



SRI L. P. MUTHUKRISHNA NAIDU



SRI A. SIVASAILAM



SRI K. M. SUBRAMANIAM



SRI G. VASUDEVA MOORTHY

JUBILEE PATRONS



SRI P. SUBRAMANIAN



SRI A. SUBRAMANIA PILLAI



SRI ANNAMALAI PILLAI



SRI M. BHAGAVATHI PERUMAL PILLAI



SRI SWAMIKANNU PADAYACHI



SRI T. T. S. THIPPIAH



SRI A. BRAHMANANDA SWAMY



SRI N. CHUNCHIAH



SRI J. G. JOHNSON



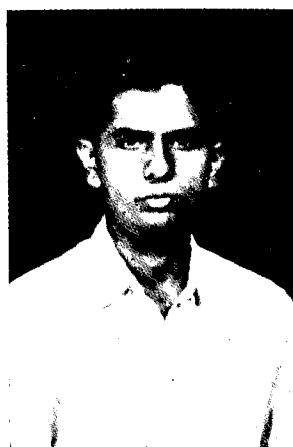
SRI A. L. MADHAVA REDDY



SRI P. NEELAKANTA PILLAI



SRI M. K. PERTIANNAN



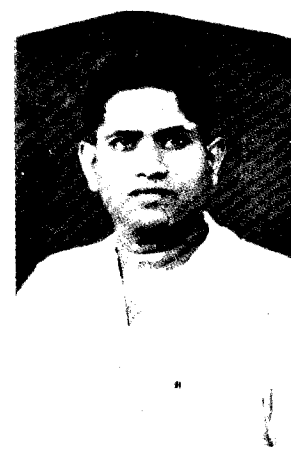
SRI S. MEERASA



SRI T. E. K. MOHAMMED



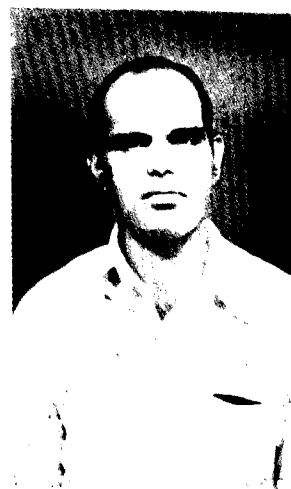
SRI C. RAMASWAMY REDDIAR



SRI C. SADASIVAM



SRI A. V. MURUGESA MUDALIAR



SRI V. NARAYAN PRASAD



SRI A. SARAVANAI PANICKER



SRI S. N. SEETHAPATHI



SRI V. SIVARAM PRASAD



SRI SYED MOHAMMED



SRI VEERAMUTHU UDAYAR



SRI N. V. VENKATACHALA PADAYACHI



SRI VENKITAKRISHNA IYER

FORMER PATRONS

1. Dewan Bahadur C. Arunachala Mudaliar, Zamindar of Chunnampet, Chunnampet P. O.
2. Raja Sri Krishnachandra Gajapathi Narayana Dev, Parlakimidi P. O.
3. Sri V. C. Palaniswami Gounder, M. L. A., Vellakinar, Coimbatore Dist.
4. Dr. C. P. Ramaswami Iyer, Ootacamund.
5. Sri Jeevandass, Varnasi, Parlakimidi P. O.
6. Sri Ramachandra Ananga Bhima Dev, Kesari Gajapathi, Raja Saheb of Budokhemidi, Berhampore, Ganjam Dist.
7. Rao Bahadur K. T. Alwa, Retd. Deputy Director of Agriculture, Mangalore.
8. Sri R. K. Kandaswamy, "Brindavan", Tiruchi Road, Coimbatore.
9. Sri G. D. Naidu, "Gopal Bagh", Avanashi Road, Coimbatore.
10. Sri K. Thiruvengkata Mudaliar, 34, 2nd Main Road, Gandhinagar, Madras-20.
11. Sri P. G. Karuthiruman, B. Sc., M. L. A., Nanjaipuliampatti, Thukkanaickenpalayam, P. O., (Via) Anthiyur, Coimbatore Dist.
12. Sri K. Venkataswami Naidu, B. A., B. L., Gopalapuram, Coimbatore.
13. Sri M. S. Palaniappa Mudaliar, B. A., 125, Rajah Street, Coimbatore.
14. Sri A. K. Balaramaraju, Land-Lord, Rajapalayam.
15. Sri K. P. Amrithanatha Iyer, Monkompur P. O., Kerala State.
16. Sri N. S. Vydianatha Iyer, Selganpuram, (Via) Kodavasal, Tanjore Dist.
17. Sri M. Subba Rao, B. Sc., (Ag.),
18. Sri M. R. Balakrishnan, B. A., B. Sc. (Ag.), F. A. O., Irrigation Agronomist, Bangkok, Thailand.
19. Sri S. Raja Iyengar, Land-Lord, and Agriculturist, Madurai.
20. Sri R. Ramakrishna Naidu, Palamalai Ranganathar Mills, Perianaickenpalayam P. O.
21. Sri C. M. John, B. A., Agricultural Technical Adviser, The Potash Scheme-India, 7, Lavelle Road, Bangalore-1.
22. Sri S. N. Venkataraman, B. A., B. Sc. (Ag.), Retd. Deputy Director of Agriculture (H. Q.), 33, Third Main Road, Gandhinagar, Madras.
23. Dr. T. S. Sadasivan, Director, Botany Laboratory, Madras University, Triplicane, Madras-5.
24. Sri W. P. A. Soundara Pandian & Sons, Pattiveeranpatti P. O., (Via) Kodai Road.
25. Sri M. A. Ayee Gounder, Kasipalayam, (Via) Gobichettipalayam.
26. Sri K. S. Vengu Chettiar, 'Kottachi House' Kornad, Mayuram.
27. Sri V. P. K. Kayarohanam Pillai, Agriculturist & Businessman, Nagapattinam.
28. Sri A. K. Subramania Odyan, Mirasdar, Attur Village, Nannilam Taluk.
29. Sri R. V. Sundara Reddiar, B. A., B. L., Advocate, 'Bhaskara Vilas', Cuddalore.
30. Sri N. M. Rajaram Reddiar, Nathapet P. O., Cuddalore.
31. Sri M. Arunachalam, B. Sc. (Ag.), C/o. Sri Muthunara Reddiar, Pagandai Village P. O., (Via) Panrutti.
32. Sri S. D. Rama Reddiar, Purnasugaipalayam P. O., (Via) Pallianellur, Villupuram.
33. Sri S. Kothandapani Pillai, Purnasugaipalayam.

34. Sri G. Venkatamuni, B. Sc. (Ag.), Partner, Mysore Fertiliser, 34, North Beach Road, Madras.
35. Sri C. K. N. S. Nagarajan, Valavanoor, S. Arcot Dist.
36. Sri D. Konda Reddiar, Municipal Chairman, Villupuram, S. Arcot Dist.
37. Sri V. Sarangapani Gounder, M. L. A., Mirasdar, Maharajapuram, (Via) Villupuram East P. O., S. Arcot Dist.
38. Sri R. Subramania Reddiar, Mirasdar of Irvelpet, P. O., Villupuram Taluk.
39. Sri G. Govindan, Proprietor, Ramson & Co., Madras.
40. Sri C. K. N. S. Bhaskaran, Valavanoor, S. Arcot Dist.
41. Sri K. Santhanam, Suvarnavur, Villupuram.
42. Sri S. Sivasankaran Chettiar, Land-Lord & Merchant, No. 2, Big Kannara Street, Mayuram, Tanjore Dt.
43. Sri K. M. Venkatachalam, Dip. Econ., 16, Chockalingam Pillai Street, Chidambaram.
44. Sri S. Ramamurthy Iyer of Kunnam, Land Holder, Kunnam House, Sirkali, Tanjore Dist.
45. Sri S. Balasubramaniam, Brinda, 7, Vallabai Road, Tallakulam, Madurai.
46. Sri S. P. Sekkappan, Godhana Estate, Betta Damane P. O., Chickmagalur Dist., Mysore State.

NEW PATRONS

1. Sri C. Adhimoola Reddiar, Village Munsiff, Narayanamangalam Village P. O., Perambalur Taluk, Tiruchirapalli District.
2. Sri M. N. Ananthanarayanan, Mirasdar, Manakkal, 2-A, Sirudayur Agraharam, Lalgudi, Tiruchirapalli District.
3. Sri V. Arjunan, Bone Specialist, Telungupalayam Vaidyasalai, Telungupalayam P. O., Coimbatore District.
4. Sri T. P. Attimuthu, Vice-Chairman, Panchayat Union Council, Thondamuthur, Coimbatore Dt.
5. Sri N. Balasubramania Thevar, Melakkadu Village (P. O.), Thambikottai, Pattukottai Taluk, Thanjavur District.
6. Sri Bava P. Chokkappa, Kulinnarar, Chairman, Panchayat Union Council, Koradacheri.
7. Sri N. Boriah, Planter, Hony. Secretary, Farmers' Forum, Ootacamund.
8. Sri V. Damodaraswamy Naidu, B. A., Proprietor, Indra Ginning Mills, Athipalayam, Vaiampalayam P. O., Coimbatore-6.
9. Sri C. C. Hamza, Proprietor, The Deccan Fertilizer Co., P. B. No. 250, Coimbatore.
10. Sri Hebbar S. N. Das, Proprietor, Coimbatore Fertiliser Co., Vysial Street, Coimbatore-1.
11. Sri G. Kanakasabai, M. A., B. T., Correspondent, Lalgudi Girls' High School, Lalgudi, Tiruchirapalli District.
12. Sri R. Kavetti Naidu, Mirasdar, Gundukinar Thottam, Udayampalayam P. O., Sowripalayam Village, Coimbatore-4.
13. Sri M. V. Krishna Iyer, B. A., B. L., Managing Partner, Kerala Commercial Fertilisers, T. D. Road, Ernakulam.
14. Sri T. S. Krishna Rao, B. A., A. B. I., Pudur House, Perumal Sannathi St. Tirunelveli.
15. Sri M. S. Madhuchandran, Land Lord, 12, Perumal Tank East Road, Madurai-2.
16. Sri M. K. Mathi Gowder, Mathipalayam, Coimbatore Dt.
17. Sri K. S. Muthu Iyer, Agriculturist, Importers & Exporters, Ammon Sannathi St., Tirunelveli Town.

18. Sri L. P. Muthukrishna Naidu, Proprietor, L. P. Krishnaswamy Naidu & Bros., 53, Periaswamy Road, Coimbatore-2.
19. Sri P. Narayana Pillai, Land Lord, Kurumbal, Tiruchirapalli District.
20. Sri D. Narayanaswamy, President, Co-operative Agricultural Bank, Ammapalayam, Perambalur Taluk, Tiruchirapalli District.
21. Sri R. Palaniappa Mudaliar, Manure Dealer, Proprietor, M/s M. Ramaswamy Mudaliar & Sons, Vysial Street, Coimbatore-1.
22. Sri T. V. V. Pathi, Proprietor, Scientific Fertilisers Company, Ponnurangam Road, Coimbatore.
23. Sri G. Purushothama Naidu, Managing Agent, C. S. & W. Mills Ltd., Coimbatore.
24. Sri V. V. Rajagopal, B. Sc. (Ag.), Agronomist, Rallis India Ltd., Charing Cross, Ootacamund.
25. Sri N. Rajagopalaswamy Naidu, Coimbatore Chemicals & Fertilisers Ltd., Vysial Street, Coimbatore.
26. Sri M. S. P. Rajes, Lake View, Yercaud, Salem District.
27. Sri N. S. Ramalingam, B. A., M. L. A., Land Lord, Nedumbalan Post, Thanjavur District.
28. Sri P. N. Raman, B. A. (Hons.), Principal, Trichy Tutorial College, Tiruchirapalli.
29. Sri R. Rama Reddiar, President, Taluk Congress Committee and Perambalur Co-operative Supervising Union, Perambalur, Tiruchirapalli District.
30. Sri S. Rangarajan, Managing Partner, Chellam & Co., Annur P. O., Musiri Taluk, Tiruchirapalli District.
31. Sri V. Ravindranath, Partner, Mysore Insecticides Company, 31-A, North Beach Road, Madras-1.
32. Sri N. Sastha, Palkulam Estate Private Ltd., Nagercoil, Kanyakumari District.
33. Dr. K. M. Senkottaian, M. B., B. S., Gobi Extension, Gobichettipalayam, Coimbatore Dt.
34. Sri S. Shanmugasundaram, Valivalam, Kivalur Panchayat Union, Nagapattinam Taluk, Thanjavur District.
35. Sri T. P. Sivanandam, Agent, Shaw Wallace & Co. Ltd., Tiruchirapalli-2.
36. Sri A. Sivasailam, General Manager, Tractors & Farm Equipment Ltd., Madras.
37. Sri K. M. Subramaniam, Kullampalayam, Chairman, Panchayat Union Council, Gobichettipalayam-1.
38. Sri P. Subramanian, Parry's Fertiliser Distributor, Cape Road, Nagercoil, Kanyakumari District.
39. Sri A. Subramania Pillai, Arumugha Jewellery Mart, Tower Junction, Nagercoil, Kanyakumari District.
40. Sri Swamikannu Padayachi, Edakalambur Village, Udayarpalayam Taluk, Tiruchirapalli District.
41. Sri N. Swaminatha Mudaliar, Land Lord, President, Agricultural Bank, Kachanan, Thanjavur District.
42. Sri T. T. S. Thippiah, Thaliyur, Chairman, Panchayat Union Council, Thondamuthur, Coimbatore Dt.
43. Sri A. Theagaraja Iyer, Adhamangalam, Valivalam P. O., Kivalur Block, Nagapattinam, Thanjavur District.
44. Sri D. Varadarajulu Naidu, Avanashi Road, Coimbatore.
45. Sri G. Vasudeva Moorthy, B. Sc. (Ag.), C/o Mysore Insecticides Company, 43, Diwan Bahadur Road, Coimbatore-2.
46. Sri A. Vasudeva Naidu, Vidyapuram, Kankaduvanitham P. O., Thanjavur District.

JUBILEE PATRONS

1. Sri Annamalai Pillai,
Land Lord, Adanakuruchi,
Sendurai, Tiruchirapalli Dt.
2. Sri M. Baghavathi Perumal Pillai,
Co-operative Colony,
Ramavarmapuram, Nagercoil,
Kanyakumari District.
3. Sri A. Brahmanandaswamy,
Cave Street, Nagercoil,
Kanyakumari District.
4. Sri N. Chunchiah, Vice-President,
Nilgiris Farmers' Forum,
Aravangadu P. O., The Nilgiris.
5. Sri P. C. Dharmalinga Mudaliar,
34/6, South Street, Vilanadai,
Andimadam, Tiruchirapalli Dt.
6. Sri J. G. Johnson, B. A.,
'Kalpagam', Marthandam,
Kanyakumari District.
7. Sri A. L. Madhava Reddy,
Proprietor, Saraswat Lakshmi
Motor Service, Srimushnam,
South Arcot District.
8. Sri S. Meersa, Agriculturist &
Rice Goods Merchant, Thittuvilai,
Kanyakumari District.
9. Sri T. E. K. Mohammed Anuridin,
Chetty Street, Adhuthurai,
Thanjavur District.
10. Sri A. V. Murugesu Mudaliar,
6/9, Vilandai, Andimadam,
Tiruchirapalli District.
11. Sri V. Narayan Prasad,
Govt. Approved Nursery,
15, Kottanakara Street,
Tiruppathur, North Arcot District.
12. Sri P. Neelakanta Pillai, B. A., B. L.,
Advocate, Thuckalay,
Kanyakumari District.
13. Sri Padmanabhan,
Pagandai P. O.,
(Via) Melappattampakkam,
Cuddalore.
14. Sri M. K. Periannan,
Sannadhi Street, Chettikulam,
Tiruchirapalli District.
15. Sri C. Ramaswamy Reddiar,
Main Road, Chettikulam P. O.,
Perambalur Taluk,
Tiruchirapalli District.
16. Sri C. Sadasivam,
Village Munsiff, Thervani P. O.,
Perambalur Taluk,
Tiruchirapalli District.
17. Sri A. Saravanai Panicker,
General & Tobacco Merchant,
Kottar, Kanyakumari District.
18. Sri S. N. Seethapathi, Mirasdar,
Sengonam Village P. O.,
Perambalur Taluk,
Tiruchirapalli District.
19. Sri V. Sivaram Prasad,
Govt. Approved Nursery,
6, Kullappa Gounder Street,
Tiruppathur, North Arcot Dt.
20. Sri Syed Mohammed, Land Lord,
Panakudi, Nanguneri Taluk,
Tirunelvely District.
21. Sri K. Veeramuthu Udayar,
President, Siruvalur Village,
Udayarpalayam,
Tiruchirapalli District.
22. Sri N. V. Venkatachala Padayachi,
Chairman, Panchayat Union
Council, Sendurai,
Tiruchirapalli District.
23. Sri R. Venkita Krishna Iyer,
Keralapuram, Thuckalay,
Kanyakumari District.
24. Sri K. Xavier, Land Lord,
Thannirpalli, Kulithalai taluk,
Karur.

List of Presidents, Vice-Presidents, Editors and Secretaries of the Madras Agricultural Students' Union.

Year	President	Vice-President	Editor	Secretary
1911	R. Cecil Wood			M. R. Ramasami Sivan
1911-'12	"	S. L. D'Silva	M. R. Ramasami Sivan	"
1912-'13	R. Cecil Wood and H. C. Sampson	"	"	"
1913-'14	R. Cecil Wood	J. Chelvaranga Raju	"	K. Krishnamurthi Rao
1914-'15	"	D. Ananda Rao	"	"
1915-'16	"	"	T. V. Narayana Rao	"
1916-'17	"	"	"	"
1917-'18	"	M. R. Ramasami Sivan	T. S. Venkataraman	K. Raghavachari
1918-'19	R. Cecil Wood and William McRae	D. Ananda Rao	"	C. Tadulingam
1919-'20	William McRae and Dr. R. V. Norris	"	T. S. Venkataraman and V. Muthuswamy Ayyar	"
1920-'21	Dr. R. V. Norris, G. R. Hilson, F. R. Parnell and R. Cecil Wood	C. Tadulingam	V. Muthuswamy Ayyar	K. T. Bhandari
1921-'22	R. Cecil Wood, Dr. R. V. Norris and F. R. Parnell	"	Y. Ramachandra Rao	B. Viswanath
1922-'23	F. R. Parnell	"	"	"
1923-'24	"	"	"	M. U. Vellodi

Year	President	Vice-President	Editor	Secretary
1924-'25	R. C. Broadfoot	C. Tadulingam	Y. Ramachandra Rao	M. U. Vellodi
1925-'26	"	"	T. V. Rajagopalachariar	M. C. Cherian
1926-'27	R. C. Broadfoot, M. R. Ramasami Sivan and C. Tadulingam	C. Tadulingam and T. V. Rajagopalachariar	V. Muthuswamy Ayyar	U. Vittal Rao, M. S. Purnalingam and M. C. Cherian
1927-'28	C. Tadulingam	T. V. Rajagopalachariar and Y. Ramachandra Rao	"	M. C. Cherian
1928-'29	"	Y. Ramachandra Rao	"	"
1929-'30	C. Tadulingam and P. H. Rama Reddi	V. Muthuswamy Ayyar	B. Viswanath	"
1930-'31	P. H. Rama Reddi and R. C. Broadfoot	T. S. Venkataraman	"	K. M. Thomas
1931-'32	R. C. Broadfoot and C. Tadulingam	T. V. Rajagopalachariar	Dr. T. V. Ramakrishna Ayyar	M. R. Balakrishnan
1932-'33	C. Tadulingam	"	"	"
1933-'34	C. Tadulingam, S. S. Sundararaman, R. C. Broadfoot and D. Ananda Rao	Dr. T. V. Ramakrishna Ayyar	G. N. Rangaswamy Ayyangar	"
1934-'35	D. Ananda Rao and R. C. Broadfoot	K. Krishnamurthi Rao and S. Sundararaman	K. Ramiah	V. T. Subbiah Mudaliar and C. S. Krishnaswami
1935-'36	R. C. Broadfoot	S. Sundararaman	"	C. S. Krishnaswami
1936-'37	R. W. Little Wood and R. C. Broadfoot	G. N. Rangaswamy Ayyangar	V. Ramanatha Ayyar	S. M. Kalyanaraman and M. A. Sankara Ayyar

Year	President	Vice-President	Editor	Secretary
1937-'38	R. C. Broadfoot	V. Ramanatha Ayyar	M. U. Vellodi	M. A. Sankara Ayyar
1938-'39	"	K. Unnikrishna Menon	Dr. J. S. Patel and M. C. Cherian	P. A. Venkateswaran
1939-'40	"	M. C. Cherian	K. M. Thomas	K. Sanjiva Shetty
1940-'41	R. C. Broadfoot and G. N. Rangaswamy Ayyangar	P. V. Ramiah and C. R. Srinivasa Ayyangar	"	T. Nataraj
1941-'42	R. C. Broadfoot, G. N. Rangaswamy Ayyangar and P. V. Ramiah	C. R. Srinivasa Ayyangar	S. N. Chandrasekharan	V. Gomathinayagam Pillai
1942-'43	P. V. Ramiah and C. R. Srinivasa Ayyangar	N. L. Dutt	C. M. John	S. V. Duraiswami
1943-'44	P. V. Ramiah	C. Ramaswami Nayudu	V. T. Subbiah Mudaliar	N. Muthuswami Nayudu and C. Balasubramaniam
1944-'45	P. V. Ramiah and C. R. Srinivasa Ayyangar	C. M. John	C. Vijayaraghavan	S. Krishnamurthi and V. Gomathinayagam Pillai
1945-'46	P. V. Ramiah	M. Anandan	P. D. Karunakar	T. S. Lakshmanan
1946-'47				
1947-'48	P. V. Ramiah and M. C. Cherian	M. B. V. Narasinga Rao	D. Viswanatha Reddy	T. S. Lakshmanan and C. Balasubramaniam

Year	President	Vice-President	Editor	Secretary
1948-'49	M. C. Cherian	D. Marudaraja Pillai	C. S. Krishnaswami	K. Meenakshisundaram
1949-'50	"	P. Krishna Rao	Dr. N. Krishnaswami	U. Achutha Wariar
1950-'51	C. M. John and P. D. Karunakar	C. S. Krishnaswami	T. R. Narayanan	T. S. Lakshmanan
1951-'52	P. D. Karunakar	G. V. Narayana	"	K. Kuppamuthu
1952-'53	P. D. Karunakar and R. Balasubramaniam	M. A. Sankara Iyer	C. Balasubramaniam	Varisai Mohammed
1953-'54	R. Balasubramaniam	M. R. Balakrishnan	Dr. N. Krishnaswami	Dr. A. Mariakulandai
1954-'55	"	Dr. N. Krishnaswami	Dr. A. Mariakulandai	F. L. Daniel and P. Madhava Menon
1955-'56	Dr. K. C. Naik	Dr. A. Mariakulandai	T. R. Narayanan	J. Sakharan Rao
1956-'57	"	T. Nataraj	A. H. S. Sarma	D. John Durairaj and K. S. Shetty
1957-'58	"	"	Dr. K. Ramakrishnan	C. M. Bhaktavatsalu
1958-'59	M. Bhavanisankar Rao, Dr. A. Mariakulandai and Dr. S. Krishnamurthi	Dr. A. Mariakulandai	T. Nataraj	V. Subbiah
1959-'60	Dr. S. Krishnamurthi	Dr. S. Kanakaraj David	"	M. Dinakaran
1960-'61	"	A. H. S. Sarma	Dr. S. Kanakaraj David and Dr. D. Daniel Sundararaj	M. Bagavandoss

AWARD OF PRIZES FOR THE YEAR 1960-'61

No.	Name of Prize	Name of the Winner	Purpose
1.	The Dewan Bahadur L. D. Swamikannu Pillai Prize	Sri C. R. Nagarajan	For securing the total highest marks in First, Second & Third B. Sc. (Ag.) Examinations.
2.	The Robertson Prize	Sri N. Mallikarjunan	For obtaining the highest number of total marks in the Final B. Sc. (Ag.) Examination.
3.	The Clougetoun Prize	Sri C. R. Nagarajan	This is a general proficiency award to a student who obtains the highest number of marks in all the terminal examinations.
4.	The Kees Prize	Sri K. K. Mathan	For the highest number of marks in Agricultural Chemistry in the Final B. Sc. (Ag.) Examination.
5.	The Dewan Bahadur R. Ragunatha Rao Prize	Sri K. S. Subbiah	For the highest aggregate number of marks in Practical Agriculture in all terminal Examinations.
6.	The Sampson's Prize	Sri C. R. Nagarajan	For obtaining the highest mark in Agricultural Botany in the Final Year B. Sc. (Ag.) Examination.
7.	The D'Silva Memorial Prize	Sri M. Velayudham	For obtaining the highest number of marks in Animal Hygiene in the Second Year B. Sc. (Ag.) Examination.
8.	The Goschen Prize	Sri M. Velayudham	For obtaining the highest marks in Agricultural Zoology in the Second Year B. Sc. (Ag.) Examina- tion.

No.	Name of Prize	Name of the Winner	Purpose
9.	The Anstead Prize	Sri Azeez Basha	For standing first in Plot cultivation in the Second Year B. Sc. (Ag.) Examination.
10.	The M. K. Nambiar Prize	Sri M. Velayudham	For obtaining the highest marks in the Second B. Sc. (Ag.) Examination.
11.	The Gupta Memorial Prize	Sri S. Michaelraj	For securing the highest number of marks in Agricultural Engineering in the Second B. Sc. (Ag.) Examination.
12.	The Food & Agricultural Organization Prize	Sri M. Velayudham	For securing the highest number of marks in Agricultural Chemistry in the Second Year B. Sc. (Ag.) Examination.
13.	The Rao Bahadur K. S. Venkatarama Ayyar's Prize	Kumari D. Shantha Sironmani	For the best student in the First Year B. Sc. (Ag.) Course.
14.	The Food & Agricultural Organization Prize	Kumari K. Nagalakshmi	For securing the highest number of marks in Agricultural Chemistry in the First Year B. Sc. (Ag.) Examination.
15.	The Golden Jubilee Shield of Chemistry Section in the year 1956.	Sri U. S. Sree Ramulu	For the best research worker in the year 1960-'61.

AGRICULTURAL JOTTINGS

January is the month of the Pongal, the harvest festival to which all farmers look forward to with keen anticipation, the festival that brings with it luxurious harvests, the consummation of all the farmers' toils throughout the year. The farmers' happiness and prosperity in the new year is dependent on the natures of these harvests.

We convey to all our farmer readers our greetings and very good wishes for a happy new year and also a happy pongal and for rich and luxurious harvests with overflowing granaries.

After the harvest is gathered, it is only opportune now to consider the proper and profitable marketing of the produce so as to fetch a good price. Hence some reference to marketing of farm produce, their proper storage etc., have been considered in these jottings.

Co-operative Marketing: Formers are well aware that the prices of all agricultural commodities will be at their lowest during the time of harvest. Because of the pressing demand for cash, the farmer is compelled to sell his produce immediately after harvest, sometimes even on the threshing floor. Naturally this is a disadvantage as it fetches a low price.

Co-operative marketing helps farmers get over this problem. If you are a member of a co-operative marketing society, the produce can be delivered to the society for safe storage and subsequent sale at the most favourable prices, when prices go up in the off season. The co-operative society will make an advance payment at very low rates of interest on the security of the produce. This facility to farmers to store and market their produce at the most favourable time and to fetch a good price has been considerably improved by the construction of a network of ware-houses all over the country with financial assistance from the government. Farmers can now store their produce conveniently, get the money they need for urgent demands and sell the produce at the most favourable price. There are expert marketing officers in charge of these marketing societies and warehouses who will be very glad to help you and advise you when to sell and look after your interests. You can also discuss your marketing problem with the local Agricultural Extension Officer or the Co-operative Inspector in the block.

Regulated Markets: From very early times, the farmer has always been handicapped in the sale of his produce and getting a fair price. He has to face several difficulties, firstly in not being able to know the current market price for the produce he has to sell. Along with this the weights and measures were not generally standardised. There were heavy commissions and several deductions from the price to be paid for. More than twentyfive years ago Government enacted the Commercial Crops Markets Act, to protect the farmer from these malpractices in the marketing of his produce. The act provided for

the establishment of centralised regulated markets where all transactions are open and properly regulated. A market committee of farmers and merchants is constituted for carrying out these regulatory functions. The prices ruling for the various grades of farm produce are publicised daily. In the case of groundnut, cotton etc., the rates prevailing in foreign markets are also published. The market trends of prices were also made known so that the farmer can make his own decision as when to sell or not to sell and hold over. The weights and measures are standardised and checked from time to time by weighmen appointed by the Market Committee. The rates of commission chargeable are also fixed. No unauthorised deductions for charity etc., are allowed. Thus everything connected with the marketing operation is properly regulated to see that the farmer gets a fair deal. There is no control of prices but only regulation of the manner of sale to the advantage of farmers. Farmers can get the best price prevailing on the particular day of the sale.

Regulated markets have been organised for several farm products like cotton, groundnut, tobacco, gingelly etc. The Secretary of the Market Committee will always help the farmer to market your produce. Seek his help and he will help you and you will profit by it.

Storage of Grains: After a good harvest, the farmer is always interested to know about the proper storage of the food grains. The important factors that are responsible for the deterioration or damage to good grains during storage are insect damage, the damage from rats and high moisture content due to incomplete drying of the grain. Good and proper drying before storing will take care of this high moisture content.

Another important point is to store the grain well raised from ground level, to prevent a damp floor. The store itself should be well ventilated, having been provided with doors and windows opening outside and close fitting. In stacking bags, it is good to pile them over some sleepers allowing a bottom space for ventilation as well as to protect the bags from absorbing the floor moisture. Stacks should not be more than 15 bags high.

To protect the grain from insect attack during storage, the stack of bags should be periodically dusted with either BHC or DDT, preferably once in two months or at shorter intervals after careful inspection. The stocks can also be fumigated with fumigants like ethylene dichloride and carbon tetrachloride by closing all the doors and windows if infestation is heavy and there are large stocks.

Damage can also come from rats and poison baits are the best and they should be attended to systematically. Zinc phosphide is an effective rat poison and can be used at 5% by weight on all baits like boiled rice, bread etc. Rat poison should be carefully handled lest the poison may accidentally hurt any man.

Growing Green Manure: Now that we have taken care of the harvested produce we may as well turn back to the field which gave us the good harvests. The need to maintain soil fertility has been stressed in previous jottings.

There are several kinds of green manures adopted to different soil conditions, climates and crops. We will refer now to some of the green manure crops like kolinji, daincha and sesbania which could be sown in the standing field of paddy crop itself, a few days before harvest. The main difficulty in green manuring is to have enough moisture in the soil for germination. The sowing in the standing crop will obviate this problem of moisture and facilitate germination with the help of the moisture already in the field. This will facilitate to get a good start for the green manure before the field is dry. Later on, the crop will grow with the help of the summer rains received now and then. The three green manure crops mentioned above are quite suitable to grow well under these conditions. Pillipasara is another green manure crop, very popular in Tanjore Delta, and this green manure can also be sown in the standing crop of paddy before harvest and allowed to grow with the summer showers.

What is important to be stressed here is that the raising of green manure in this way would provide at least some quantity of organic matter with which fertilisers could be supplemented. Farmers are apt to neglect green manuring on the plea that there is no moisture in the soil, that there is cattle trespass, etc. Even under these adverse conditions this method of green manuring will provide some organic matter which is certainly better than no organic matter and the expenditure involved is not heavy, being only the cost of the green manure seeds.

Turmeric Polisher: In areas where turmeric is cultivated, the harvesting will start soon and after harvest farmers have to start processing the turmeric for the market. The curing of turmeric for the market has to be done nicely to fetch a good price and the polishing is done with a view to remove the rootlets, scales etc. and give a shining appearance. A good appearance fetches a good price.

The turmeric polisher evolved by the Agricultural Department is a very good equipment to help in the cleaning and polishing operations. The turmeric polisher consists of a horizontally mounted barrel two to three feet long and made with expanded metal. The expanded metal has sharp edges and acts as a knife when it rotates. The barrel is provided with a handle at either end and is rotated by two men. The expanded metal itself is covered on the outside with woven wire netting. The turmeric to be cleaned is put inside the barrel and rotated when the rhizomes get cleaned and polished. This is effected by the rhizomes rubbing against the sharp edges of the expanded metal and this rubbing action removes the rootlets and scales and as the rhizomes themselves

rub against each other, a good shining appearance is obtained. After rotating for some time, a door which extends to the full length of the barrel is swung open and the entire charge falls down to a basket below. The polisher is very cheap and saves considerable labour and can polish about a ton of rhizomes per day.

Gibberillic Acid: Farmers' attention everywhere has been caught by this unusual plant regulating chemical and is as well that some information is made available about it. Agricultural scientists, the world over, are studying this chemical, because it has been known that it can change plant growth in varied and often striking ways. Gibberellins, a class of plant growth substances, are active in inducing and accelerating many types of plant growth, at extreme dilutions, even of a few parts per million. It has been reported that seeds treated with the chemical emerge faster than untreated seeds. Some kinds of seedlings have been found to grow faster and taller. It is reported to be useful to speed up growth of slowly growing timber trees. Gibberillic acid is most conveniently applied in a very dilute spray solution in water along with a suitable additive to improve solubility. The spray applications are in very dilute forms from half to 5 parts or little more per million parts.

Pioneer research on Gibberillic acid comes from Japan where it was discovered nearly three decades ago but the research work which appeared in Japanese language was not noticed till the end of world war. Active research work has been taken up now in the United States. As beginning has also been made at Coimbatore. The research results so far have not been conclusive enough to make a sure recommendation. Over dosage has been noted to do damage. Gibberillic acid has some uses to promote growth but it is too early to extend their use in commercial agriculture. One thing to remember is that no growth stimulator can be a substitute for plant food. Treated plants may need more fertilisers to sustain the growth. As more data become available, our readers will be informed of this amazing chemical.

The Leaf Spot Disease of Turmeric: The leaf spot disease is found wide spread in many turmeric areas in our state. It is seen by the extensive spotting of the leaves. The leaves may eventually dry and die off and thus adversely affect the formation of turmeric and reduce yields. Atmospheric humidity favours formation of leaf spots.

The disease is easy to control by proper spraying. In many places two sprayings with 1% Bordeaux mixture has controlled the disease. Tests have shown that dithane is equally effective in controlling the disease and it has been noted that dithane treated fields also give higher yields. Dithane is applied as a spray by diluting one pound of dithane in 60 gallons of water.

(From the Extension Specialist, Agricultural College and Research Institute, Coimbatore-3.)

Weather Review — for November, 1961.

RAINFALL DATA (IN INCHES)

Region	Station	Total rainfall for the month	Departure from normal	Total since 1st January
North	Madras (Meenambakkam) ...	4.8	— 9.2	36.0
	Tirurkuppam* ...	6.5	— 3.0	45.6
	Vellore ...	3.1	— 4.6	36.0
	Gudiyatham* ...	3.8	— 0.9	33.0
East Coast	Palur* ...	7.4	— 3.0	47.8
	Tindivanam* ...	2.8	— 4.4	36.8
	Cuddalore ...	7.7	— 7.8	49.2
	Nagapattinam ...	6.5	— 11.0	27.5
	Aduthurai* ...	4.9	— 5.2	37.9
	Pattukkottai* ...	5.1	— 3.8	35.2
Central	Salem ...	0.6	— 3.3	38.7
	Coimbatore (A. M. O.) * ...	4.0	— 1.6	29.2
	Coimbatore ...	4.1	+ 0.1	27.8
	Tiruchirapalli ...	5.1	— 1.9	36.8
South	Madurai ...	1.1	— 4.6	19.3
	Pamban ...	12.4	+ 0.7	26.0
	Koilkatti* ...	...	...	...
	Palayamecottai ...	9.3	+ 1.9	28.2
	Ambasamudram* ...	7.7	— 2.6	37.6
	Nagercoil* ...	2.9	— 4.4	53.8
Hills	Capecomorin* ...	...	...	...
	Kodaikanal ...	6.2	— 4.0	46.4
	Coonoor* ...	17.2	+ 5.6	79.5
	Ootacamund* ...	3.9	— 0.7	54.1
	Nanjanad* ...	2.9	— 1.0	78.2

* Meteorological Stations of the Madras Agricultural Department.

Dry weather prevailed in Madras State from 18—11—'61 to 29—11—'61, except for scattered showers in South Madras State on the 18th and 25th November, 1961. On the remaining days fairly widespread or local showers occurred with scattered heavy falls at a few places. The noteworthy rainfalls and zonal rainfalls are furnished hereunder:—

Noteworthy Rainfall (in inches)

S. No.	Date	Name of Place	Rainfall in inches
1.	1—11—1961	Pamban	2.76
2.	2—11—1961	Coonoor	4.72
3.	do.	Ooty	2.02
4.	3—11—1961	Coonoor	2.40
5.	16—11—1961	Ambasamudram	3.35
6.	12—11—1961	Nungambakkam	2.76
7.	15—11—1961	Kanyakumari	3.94
8.	16—11—1961	Tuticorin	3.93
9.	do.	Pamban	2.37

Zonal Rainfalls (in inches)

Name of the Zone	Rainfall for November, 1961 (inches)	Departure from normal	Remarks
North	4.6	— 4.4	Far below normal
East Coast	5.7	— 5.9	"
Central	3.7	— 1.7	Below normal
Hills	7.6	— 0.02	Just normal

(From the Agricultural Meteorologist, A. C. & R. I., Coimbatore - 3.)

Departmental Notifications

Upper Subordinates—Agricultural Department
Postings and Transfers during the month of December 1961.

Name and Designation	Posted or Transferred to
Sri A. Chami, Asst. Lect. in Agronomy, Coimbatore	Research Asst. in Agronomy, Coimbatore.
„ M. K. Sivanandam, A. E. O., Kadavur	Asst. in Co-ordinated Manurial Trials scheme, Pollachi
„ D. R. Parthasarathy, Soil Conservation Asst., Kottaikuppam	Soil Conservation Asst., Trivellore.
„ V. Balasubramaniam, Coconut Nursery Asst., Tirupparaithurai	Senior Asst. incharge, Regl. Res. Stn., Veppankulam.
„ S. Mohan Babu, Junior Asst., Regional Station, Veppankulam	Coconut Nursery Asst., Tirupparaithurai.
„ M. Shanmugam, Spl. A. D., Nellikuppam	Spl. A. D., Madurantakam
„ K. A. Shanmugavelu, Spl. A. D., Madurantakam	Spl. A. D., Tirupathur
„ S. Viswanathan, Spl. A. D., Tirupathur.	Marketing Asst., Vellore
„ T. S. Jayabarathi, Statistical Asst., Coimbatore	District Investigator, Coimbatore
„ K. Swaminathan, Paddy Asst., Coimbatore	Paddy Asst., Rice Research Station, Ambasamudram.
„ S. Sadayappan, Paddy Asst., Ambasamudram	Paddy Asst., Peravurni
„ V. Mallayan, E. O. Statistics, Udumalpet	A. E. O., Perundurai

Name and Designation	Posted or Transferred to
Sri K. C. Thomas, Farm Manager, Bhavanisagar	Proceeded on leave preparatory retirement
„ V. G. Arunachalam, A. E. O., Gobichettipalayam	Instructor, R. E. T. C., Bhavanisagar
„ V. Meenakshisundaram, Supervisor, Simple Fertiliser Trials scheme, Madurai	Allotted to chemistry section, A. C. & R. I., Coimbatore
„ T. Kumaraswami, Asst. Lecturer in Entomology	Asst. in Entomology (Nematology Scheme), Coimbatore.

New Appointments.

Sri M. Vijayarajan	Farm Manager, A. R. S., Bhavanisagar
„ K. George Verghese	A. E. O., Ulundurpet
„ A. N. Mohan Kumar	Horticultural Asst., Coimbatore
„ P. Thyagarajan	Analytical Asst., Soil Testing Laboratory, Aduthurai.
„ S. P. Sekkappan	Farm Manager, Dist. Live stock Farm, Orthanad, Thanjavur Dist.
„ M. K. Ramadoss	Statistical Asst., Coimbatore
Dr. R. Rajagopal, Banaras	Asst. Lecturer in Agronomy, Coimbatore
Sri K. P. Ganesan	Statistical Asst., Coimbatore
„ K. Gopinathan Nair	Field Supervisor, Tanjavur
„ Abranam Joseph, Trivandrum	Farm Manager (Sheep Farm), Kattupakkam
„ V. Rajan Henry	Asst. in Potato, Nanjanad
„ Joseph, Madhya Pradesh	A. E. O., Chinnasalam
„ K. Induchudan, Eranakulam	A. E. O., Krishnagiri
„ P. Devasahayam	Asst., Govt. Botanical Garden, Ooty.
„ Paul Thomas	Horticultural Asst., A. C. & R. I., Coimbatore
„ R. S. Jagadeesan	Asst. in Plant Pathology, Coimbatore.
„ T. S. Sridhar	do.



Review of market conditions of commercial crops in the
Madras State for the month of November, 1961.

Cotton :

COIMBATORE DISTRICT : *Season :* There was a rainfall of 45 mm. in Tirupur, 40 mm. in Pollachi, 100 mm. in Coimbatore and 35 mm. in Avanashi. There was only a slight drizzling in Udumalpet. The rains were not sufficient for the growth of the crop especially Karunganni.

Arrivals and Transactions : **Kapas :** The kapas market at Tirupur started with an opening stock of 12,392 quintals of Cambodia kapas and 304 quintals of Karunganni kapas. The total arrivals into Tirupur during the month were 24,801 quintals of Cambodia kapas and 155 quintals of Karunganni kapas. The despatches during the month were 27,393 quintals of Cambodia and 247 quintals of Karunganni kapas. At the end of the month the market was left with a stock of 9,800 quintals of Cambodia and 212 quintals of Karunganni kapas.

Lint : The lint market at Tirupur started with an opening stock of 42,593 quintals of Cambodia lint and 60 quintals of Karunganni lint. The total arrivals into Tirupur during the month were 24,167 quintals of Cambodia lint and 21 quintals of Karunganni lint, which included 4,929 quintals of Cambodia lint and 21 quintals of Karunganni lint locally ginned. Despatches from Tirupur were 28,405 quintals of Cambodia and 50 quintals of Karunganni lint. At the end of the month the market was left with 38,355 quintals of Cambodia and 31 quintals of Karunganni lint.

Prices : The prices of kapas and lint that prevailed during the month were as follows: Rs. 88 to Rs. 147 per 100 kgs. for Cambodia kapas, Rs. 275 to Rs. 375 per 100 kgs. for Cambodia lint and Rs. 109 per 100 kgs. for Karunganni kapas.

RAMANATHAPURAM DISTRICT : *Season :* Fairly good and wide spread rains were received during the month throughout the district. The rain fall recorded at Virudhunagar amounted to 15.11 cms. The rains received during the month are highly useful for the harvest of winter crop groundnut.

Arrivals and Transactions : The following were the arrivals and disposals of cotton kapas and lint (in quintals) during the month.

Name of market	Opening Stock		Receipts		Disposals		Closing Stock	
	kapas	lint	kapas	lint	kapas	lint	kapas	lint
Virudhunagar ...	...	400	3,350	1,230	3,350	1,370	...	260
Sattur ...	...	...	5,000	1,300	5,000	1,300	...	...
Rajapalayam ...	1,000	3,520	6,500	1,820	6,500	2,100	1,000	3,240
Total ...	1,000	3,920	14,850	4,350	14,850	4,770	1,000	3,500

Prices : (Prices per quintal in Rs. nP.)

Name of Commodity	November 1961	
	kapas	lint
Karunganni	... 58.66 to 97.33	225.00
Karunganni 2nd crop	... 64.00 to 88.00	...
Karunganni average	...	220.00 to 230.00
Tinny	... 68.66 to 86.66	171.00 to 220.00
Uganda 1st quality	... 113.33 to 130.33	...
Uganda 2nd quality	... 96.33 to 106.66	...
Uganda 3rd quality	... 60.00 to 86.66	...
Uganda MU2	...	402.00 to 413.00
Uganda certified	...	366.00 to 381.00

Seeds : The prices of cotton seed ranged as follows: Rs. 36.45 to 38.68, Rs. 38.68 to 41.75 and Rs. 26.31 to 33.33 per quintal of Karunganni, Tinny and Uganda respectively.

TIRUNELVELI DISTRICT : *Season :* The rainfall recorded was about 100 mm. during the month. Rainfall was considered to be very beneficial for the standing cotton crops.

Arrivals and Transactions : The following were the arrivals and disposals of cotton (in quintals) in Koilpatti and Sankarankoil markets during November 1961.

Market	Crop	Opening Balance		Arrivals		Disposals		Closing Balance	
		kapas	lint	kapas	lint	kapas	lint	kapas	lint
Koilpatti	Karunganni	250	450	745	425	955	805	40	70
Sankarankoil	Uganda	1200	90	1475	445	2575	440	100	95

Prices: The prices of cotton kapas and seed at the end of the month were as follows: Rs. 102, Rs. 95, Rs. 108 and Rs. 44 per quintal of Karunganni 1st sort kapas, Karunganni 2nd sort kapas, Uganda kapas and cotton seed respectively.

SOUTH ARCOT DISTRICT: *Season:* The North East Monsoon rains were below normal during the month. Two to seven inches of rains were received in various parts of the district. Chidambarm however received a rainfall of 11.25".

Arrivals and Transactions: (In tonnes)

	Opening Stock	Arrivals	Disposals	Closing Stock
Groundnut kernel	3,306	10,616	10,226	3,696

Prices: The average prices of kernels in the several markets ranged from Rs. 52.50 to 62.88 per 80 Kilograms. Prices declined in the second fortnight.

RAMANATHAPURAM DISTRICT: *Arrivals and Transactions:* (quantity in quintals):

	Opening Stock	Arrivals	Disposals	Closing Stock
Virudhunagar				
Groundnut kernel	1,545	12,600	11,950	2,195
Groundnut pods	...	9,200	9,200	...

Prices: November 1961.

Groundnut kernels	Pucca	65.00 to 71.66	} per 80 kgs.
do.	Katcha	53.33 to 68.66	
Groundnut oil		357.14 to 371.42	} per 226.80 kgs.
do.	Cake	79.30 to 95.59	

NORTH ARCOT DISTRICT: *Season:* The winter conditions have set in the district and the weather continued to be dry with chilly winds and cold nights. Towards the later part of the month, cloudy weather with occasional showers prevailed all over the district.

Arrivals and Transactions: The arrivals, disposals, price etc. of Groundnut in the district during the month were as follows:

	Opening Stock	Arrivals	Disposals	Closing Stock
Groundnut pods (bag of 40 kg.)	13,100	67,408	65,808	14,700
Groundnut kernel (bag of 80 kg.)	4,353	1,12,329	1,03,248	13,434

Prices: Groundnut pods (per bag of 40 kgs.) Rs. 16.00 to 25.00; Kernels (per candy of 240 kgs) Rs. 174 to 216.40; Oil (per candy of 226 kgs.) Rs. 372.00 to 480.00.

TRICHIRAPALLI DISTRICT: *Season:* Only light to moderate rains have been received in some parts of the district during the month.

Arrivals and Transactions: The regulated Market of Jayankondan received 1,788 bags of Groundnut kernels and 100 bags of Gingelly; Karur 7 bags and Ariyalur 18 bags of Groundnut kernels during the month.

Prices: The price of Groundnut kernels for average quality was quoted at Rs. 195/- per candy of 240.85 kgs.

Gingelly:

SOUTH ARCOT DISTRICT: *Arrivals and Transactions:*

	Opening Stock	Arrivals	Disposals	Closing Stock
Gingelly (bag of 80 kgs.)	841	9,123	8,700	1,264

Prices: The average prices in the several markets ranged from Rs. 111 to 126 (per 100 kgs.)

Tobacco:

COIMBATORE DISTRICT: At the end of the month under report, there was a stock 34,955 quintals of chewing and 2,330 quintals of cheroot tobacco. About 5,911 quintals of chewing and 650 quintals of cheroot tobacco were exported to places in Kerala, Andhra, Mysore and Bombay States and to Salem, North Arcot, Nilgiris and Madurai districts of Madras State.

The month witnessed dull conditions in the tobacco market, as demand from Kerala which is the chief importing market for chewing tobacco was lacking. Prices however remained steady around the level of the previous month. The prices of Meenampalayam variety ranged from Rs. 95 to 229 per quintal according to quality in Gobi area. There was good demand for pit cured varieties in Palladam from the merchants of North Arcot and Chingleput District.

Variety	Ist Grade	II Grade	III Grade
1. Chewing tobacco sun-cured:			
(a) Meenampalayam	Rs. 229	180—225	95—135
(b) Other varieties	Rs. 176—225	120—175	66—120

Variety	Ist Grade	II Grade	III Grade
2. <i>Cheroot varieties sun-cured:</i>			
Grown in Erode and Bhavani Taluks	Rs. 160—220	90—176	44—91
3. <i>Chewing tobacco pit-cured:</i>			
Grown in Palladam and Sultur areas.	Rs. 250—297	160—230	100—130

Cardamom:

MADURAI DISTRICT: During the month there was good to heavy rainfall in the most of the cardamom plantation areas in Madurai district as well as in Kerala hills adjoining Madurai district. Condition of the standing crop was good.

Prices: (per lb.)

1. <i>Bodinayakanur:</i>			
Motta green	Rs. 8.56		
Extra green	„ 7.00 to 7.50		
Medium	„ 5.98 to 6.00		
Thakkolam	„ 2.51 to 4.80		
Black	„ 2.82 to 3.36		
Seeds (Inferior)	„ 5.27 to 6.79		
2. <i>Virudhanagar:</i>			
Extra bold	Rs. 8.12 to 8.25		
Shipment green	„ 5.81 to 5.87		
Green	„ 6.87 to 6.94		
Rabin	„ 8.75 to 8.87		
Smalls	„ 6.25 to 6.37		
Seeds	„ 9.12 to 9.25		
3. <i>Pattiveeranpatti.</i>			
	Sundried.	Store green.	
Superior and bold	Rs. —	Rs. 8.27 to 8.45	
Medium and bulk	„ 6.50 to 8.00	„ 6.52 to 7.80	
Inferior and small	„ 3.74 to 6.43	„ 4.22 to 6.41	
Splits	„ 5.22 to 5.52		
Lights	„ 2.51 to 3.50		
Seeds	„ 8.22 to 8.32		

Review of administrative activities of market committees in the Madras State during the month of November 1961

The Market Committees of South Arcot, North Arcot, Coimbatore, Trichirapalli, Tirunelveli and Ramanathapuram continued to function during the month under report.

Enforcement:

Name of the Market.	Section 5 (1)		Section 5 (3)		Weighmen.	
	A	B	A	B	A	B
South Arcot	610	3114	536	2226	501	2002
North Arcot	1507	3785	1490	3711	192	885
Coimbatore	101	2091	65	1532	13	611
Trichirapalli	211	2124	197	1951	194	1744
Tirunelveli	7	275	—	101	4	240
Ramanathapuram	19	483	6	404	3	321

N. B.: A: Licences issued during the month.

B: Licences issued upto the month.

Meetings:

A meeting of the Coimbatore market committee was held on 11—11—1961 in the Office of the committee at Tirupur and 21 subjects were considered and passed. The committee approved the budget estimates of receipts and expenditure for the year 1962. The fifth ordinary meeting of the Trichirapalli Market Committee was held on 5—11—1961 under the Presidentship of Sri B. Venkatachalam Pillai, Chairman and in all 15 subjects were disposed off. The Committee's revised estimate for 1961 and Budget estimate for 1962 was adopted in this meeting after the same has been prepared and approved by the executive sub-committee on the same day. No meetings were held during the month by South Arcot, North Arcot, Tirunelveli and Ramanathapuram Market committees.

Quality Analysis and competition: Nil.

THE MADRAS AGRICULTURAL JOURNAL

Hints to Contributors

The pages of the Madras Agricultural Journal shall be open ordinarily only to the members of the Madras Agricultural Union.

All articles for Publication should be addressed to the Editor, Madras Agricultural Journal, Lawley Road, P. O., Coimbatore.

In view of the high cost of printing, contributions should be as concise as possible and should conform to the best usage in the leading Journals published in India and abroad.

Manuscripts should be typed with double spacing on one side of the paper only and with wide margin. They should not ordinarily exceed 5,000 words or 12 pages of printed matter including tables and illustrations in the Journal. Manuscripts should be carefully revised; numerical data and calculation checked. Main headings in the text should be typed in capitals with paragraph indentations and followed by a period and two hypens. Sub-heads should be lower case and be underlined to indicate italics. Latin nomenclature and local terms etc., should be in italics. Original papers must conclude with a summary of not more than 300 words, drawing attention to the main facts and conclusions. A very short synopsis of 50 to 75 words should also be furnished.

Tables: The number of tables should be restricted to those absolutely necessary, as numerous tables detract from the readability of the article. Each table should be numbered consecutively from 1 up and must have a heading stating its contents clearly and concisely. The tables are to be typed on a separate sheets with their positions marked in the text.

Illustrations: Wherever possible illustrations should be made with pen and Indian ink for reproduction as line blocks. The name of the author, title of the article and figure number should be written on the back of each figure in blacklead pencil. Each figure should have a legend typed on separate sheet.

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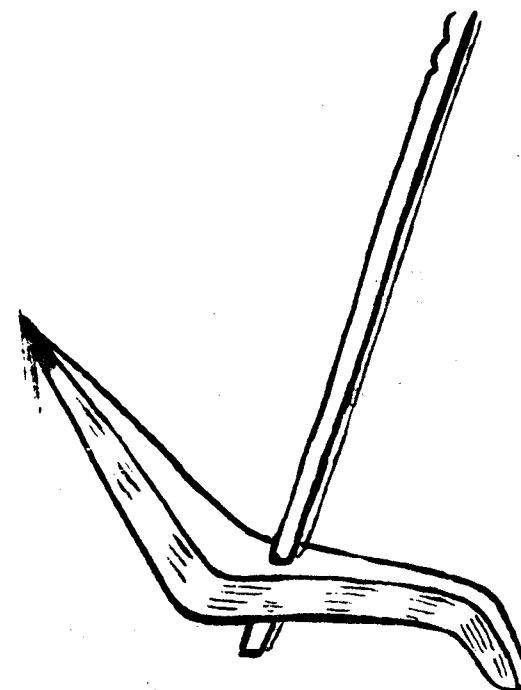
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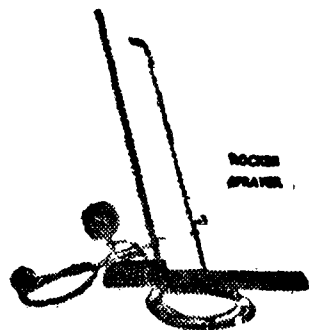
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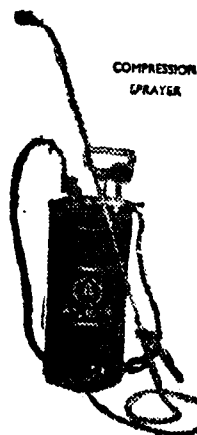
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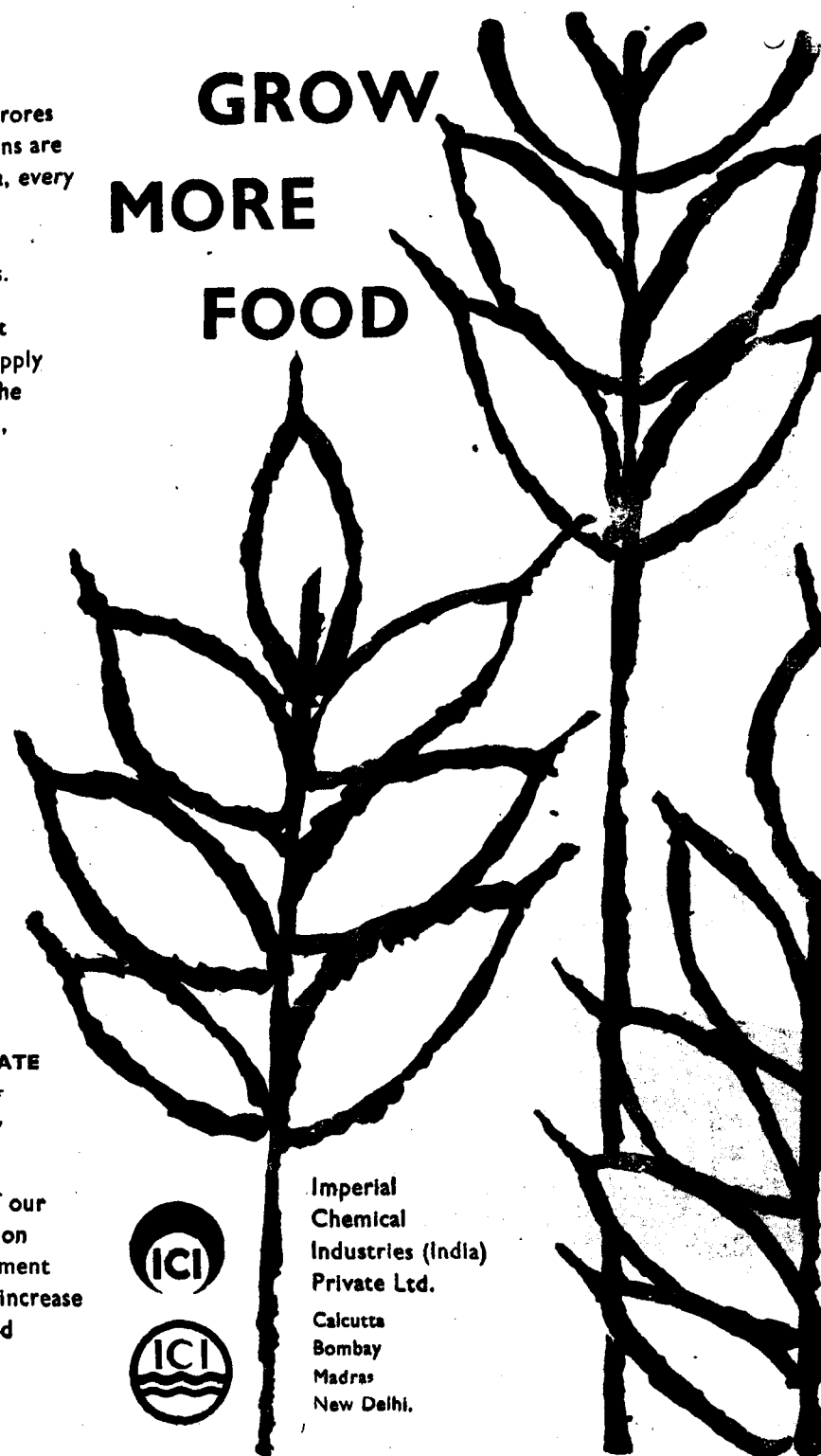
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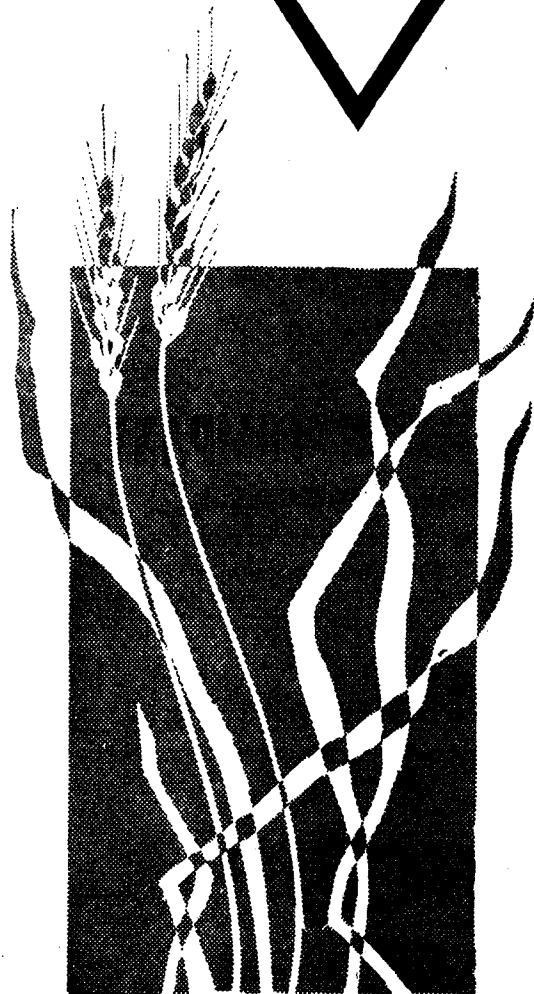


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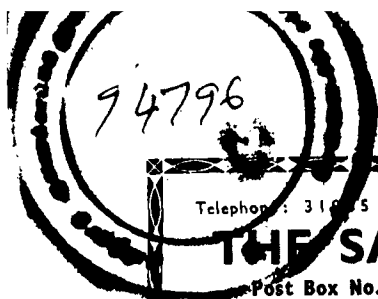
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